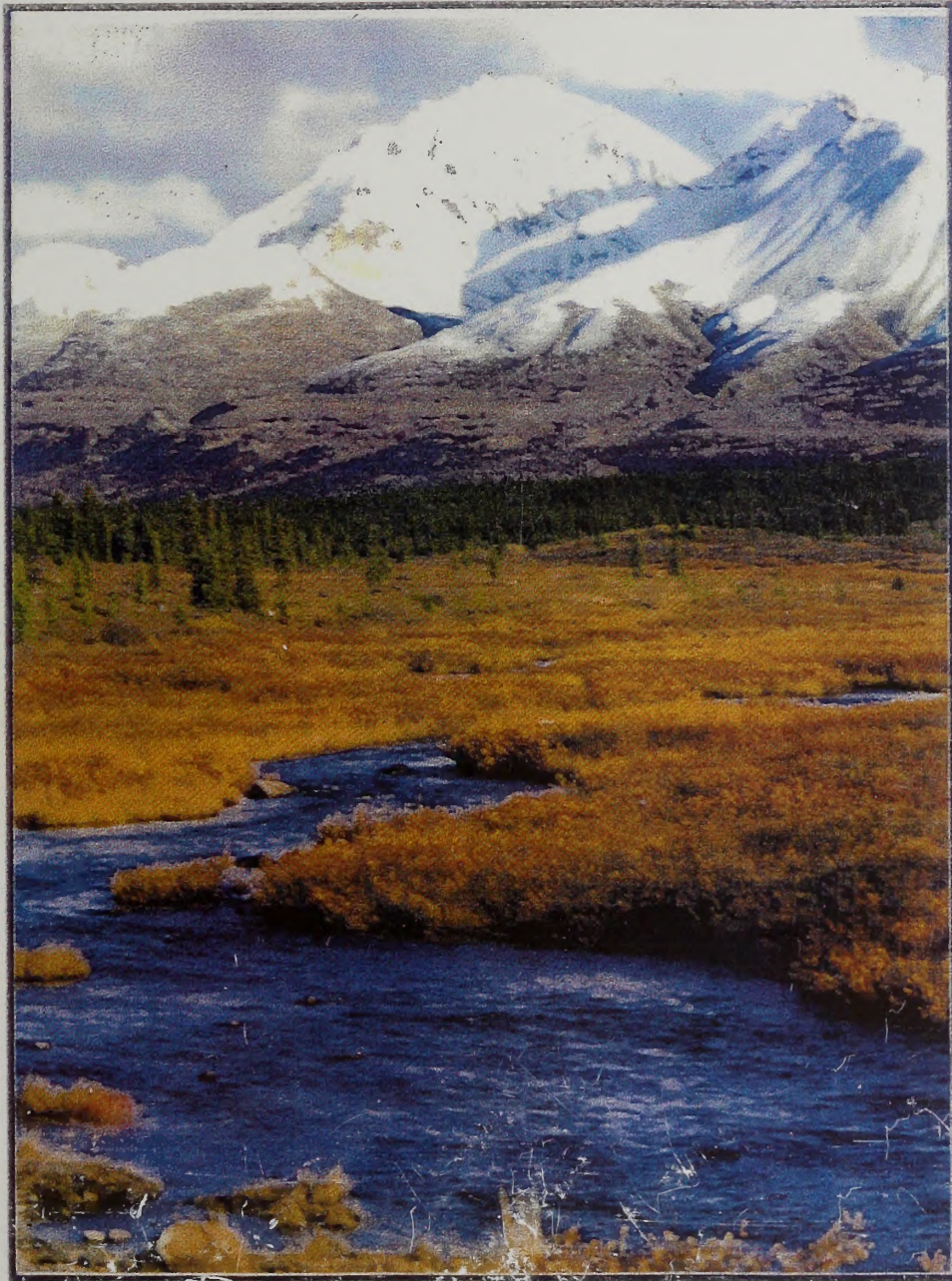


Denali Highway

Interpretive Master Plan



Acknowledgments

Interpretive Master Plan

for the

Denali Highway

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This plan could not have been completed without the effort and support of many people, especially those in the Glennallen Office of the Bureau of Land Management. They did a remarkable job of supplying all the information we requested, answering our questions, arranging for and accompanying us on site visits and reviewing our submittals while still tending to the myriad of tasks that they had to do to keep everything going. Thank you for all your efforts:

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A special thanks to those who accompanied us on our trips on the highway. It was quite a chunk of time to spend away from the office, but invaluable to the preparation of this plan. An extra special thanks to Marcia for taking time to take us up and down the Denali Highway, not once, but twice and for all her efforts as COR. The only way such a project can be completed satisfactorily on such a tight time frame is if you have a very efficient and supportive COR. We had both in Marcia.

Thanks!

Foreword

Before presenting the details of the Interpretive Plan, it is important to clarify the purpose of such a tool, where it fits within an overall planning process, and how it guides the development of interpretive opportunities for this facility. With that in mind, please consider the following points:

- This is a *plan*, not a design. A plan is intended to provide an interpretive designer with sufficient information to design recommended opportunities. It gives the designer a road map of the interpretive destination, and the media vehicles and routes to be used in reaching that destination. With that information, when funding is available, individual projects specified in the plan can be designed and produced. Individual projects should not be designed until the plan is approved, thus ensuring that what is designed will still work as more of the network is created.
- Plans represent a snapshot in time. They are based on information at hand and circumstances that are true *at the time*. The recommendations represent our best professional guess at this time. They are intended to be guidelines to suggest direction, and are not set in stone. As circumstances, audience, goals, and information change, the plan should be reviewed and changed accordingly.
- Final preparation of this document was done by an outside contractor, and contains recommendations to the USDI Bureau of Land Management. Those recommendations do not necessarily represent the decisions or viewpoints of the agency.

With that in mind, we present the Interpretive Master Plan for the Denali Highway.

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Executive Summary

The Project Area (see Figure 1) is within the boundaries of BLM's South Central Planning Unit and is managed in accordance with the Management Framework Plan (MFP) for the unit, which was developed in 1980 and amended in 1983 and 1985. Parts of the Project Area fall under more specific and restrictive plans, such as the Cultural Resources Management Plan for the Tangle Lakes Archaeological District, and the management plans for the Delta National Wild, Scenic and Recreational River and for the Gulkana National Wild River.

In those plans, interpretation has been identified as a means of helping to reach management goals involving enhancing recreational experiences, and protecting resources through educating visitors to the value of those resources. An information network, which includes both interpretive and orientation information, can help achieve the management goals of protecting the resources and enhancing recreational experiences by accomplishing the following:

1. **Protect the resources by reducing human impacts to the ecosystem.** This can be achieved by increasing personal stewardship, which can be accomplished by reaching the following objectives:

- 1-1. Make visitors aware of the personal value of the cultural and natural resources along the Denali Highway.
- 1-2. Make visitors aware of the susceptibility of those resources to human impacts.
- 1-3. Make visitors aware of their personal impacts to those resources and how to minimize those impacts.
- 1-4. Make people aware of use restrictions and laws related to protecting those resources.

NOTE: In essence, the goal is to create or heighten the visitors' environmental ethic so travelers will be good stewards.

2. **Protect the resource by increasing support for management policies.** This can be achieved by reaching the following objectives:

- 2-1. Make visitors aware of the personal value of the cultural and natural resources along the Denali Highway.
- 2-2. Increase understanding of the ecosystems that provide the context for those resources and make visitors aware of the susceptibility of those ecosystems and resources to human impacts.
- 2-3. Make people aware of the connection between that susceptibility to negative human impacts and management policies aimed at protecting the environment.
- 2-4. Raise awareness of the identity of the managing agencies and of the cooperative nature of the management effort.

- 2-5. Raise awareness of the unique political circumstances affecting management of the adjacent public lands. This includes subsistence hunting, the presence of an Archaeological District, mining activities, the National Wild Rivers, management by several agencies, and perhaps the legislation governing selection of lands by the State and Ahtna, Inc.

3. Contribute to appropriate and satisfying recreational activities and use patterns.

This can be achieved by reaching the following objectives:

- 3-1. Create appropriate expectations among visitors as to the nature of a trip on the Denali Highway.
- 3-2. Facilitate recreational experiences by providing an effective orientation system that serves all segments of the recreating public. The system will orient travelers not only to the transport system and services, but also to the recreational and informational opportunities.
- 3-3. Increase the degree of safety by making all visitors aware of the hazards associated with being in Alaska generally, and with each recreational activity specifically, including traveling the Denali Highway, backpacking, etc.
- 3-4. Enrich the recreational experience by providing a satisfying interpretive experience focusing on the natural and cultural resources along the route.

Key audiences to reach in order to achieve those goals were identified as:

1. **Visitors traveling the Denali Highway as their primary recreation experience.** This group can be subdivided into visitors traveling in tours, and independent travelers. No distinction is made between Alaskans and visitors from out-of-state because that distinction does not affect the interpretive or orientation network significantly.
2. **Travelers using the Denali Highway to access other recreational opportunities.** These people are focused more on backpacking, ATV riding, snowmobiling, hunting, fishing, birdwatching, photography or some other opportunity as the primary recreational activity. For some of these visitors, traveling the Denali Highway is an integral part of the recreational experience. For others, it is simply a means of access. Again, no distinction is made between Alaskans and visitors from out-of-state because that distinction does not affect the interpretive or orientation network significantly.
3. **People traveling the highway for purposes other than recreation.** This would include those for whom gathering food by hunting, fishing or other means is an important and integral part of their lifestyle. It would also include those who live along the highway, and those who are using it as a transit route to access Denali National Park or the Wrangell Mountains.

Alaska State Lands



State Patented or Tentatively Approved
(Land Administration System, May 31, 1994)



State Legislatively Designated Areas
(Land Administration System, February, 1993)



State Selected
(ANILCA Topfilings included)
(Land Administration System, May 31, 1994)



State Marine Parks

Alaska Native Claims Settlement Act (ANCSA) Lands



ANCSA Patented or Interim Conveyed
(Bureau of Land Management, January 30, 1994)



ANCSA Selected
(Bureau of Land Management, January 30, 1994)

Federal Lands



National Wildlife Refuges¹ &
National Park System



National Forests and Monuments &
National Recreation and Conservation
Areas



National Wild & Scenic Rivers
outside National Park System and
outside National Wildlife Refuges



National Petroleum Reserve - Alaska
(NPRA)



Major Military



Bureau of Land Management
Public Lands

Figure 2: Land Status Map

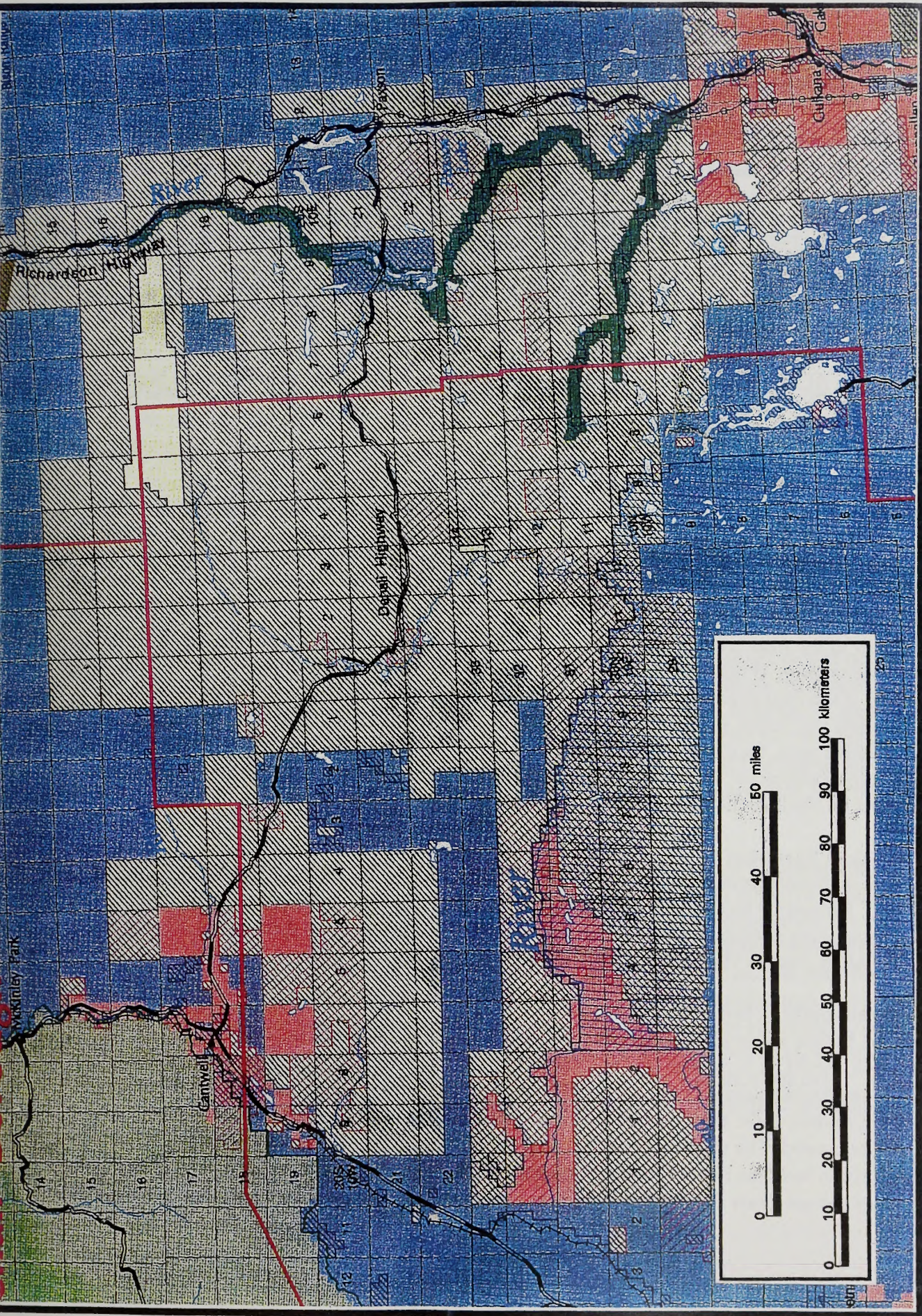


Fig. 2: Land Status Map

Although all factors noted in this report are significant, the following points are critical to understanding the project.

Land ownership:

The status of ownership of the land adjacent to the Highway is uncertain due to the fact that much of it has been selected by the State under the Statehood Act, or Ahtna, Inc. under the 1971 Alaska Native Claims Settlement Act (ANCSA) (see figure 2). Whether it will remain selected or not is unclear. Nor is it clear when conveyance will occur if the lands remain selected. Until the selection process is completed, ownership—and consequently management philosophy—will not be known. Since interpretive program goals are derived from the management philosophy, it is difficult to derive the goals for an Interpretive Network with any degree of confidence. For the purposes of this project, it will be assumed that the BLM will continue to be the primary manager of the lands adjacent to the highway.

Remote Setting:

The area is remote, with few emergency services available to the traveler, including a lack of communication along the highway. The situation makes it important to provide basic information to the traveler, yet the setting and conditions make maintenance difficult and staff presence almost impossible. Therefore, non-personal, low maintenance informational and interpretive opportunities are the preferred option.

Road Surface:

Most of the road is currently unpaved, making travel slow. However, paving the road is under consideration. If that occurs, the amount and type of visitation will shift as will the patterns of use. If the road is paved, rental cars will be allowed on the road and more tour buses will include the Denali in their itinerary. Travelers may take the road faster and at more of a constant pace, thus creating the opportunity for an audio tour. Instead of the Denali Highway being a destination for travelers, it may become a travel corridor. The interpretive program must be flexible enough to adapt to this change should it occur.

Lack of Facilities:

The highway currently has few outhouses available along the way with little chance of adding any. No agency has the resources and/or is willing to commit resources necessary for maintaining additional outhouses along the route. The information network must make this situation clear to visitors before they embark on their trip.

Availability of funding:

The budget for developing interpretive opportunities is unknown, but likely to be limited. Also, the BLM is unlikely to invest heavily in interpretive opportunities outside the Tangle Lakes Archaeological District and the National Wild and Scenic Rivers because those areas will remain under their management, while much of the other area along the easement may be conveyed. The state has also indicated that the Department of Natural Resource is not likely to have the time or funding to maintain facilities along the route. It can be assumed that they are not likely to have the funding to develop additional opportunities without partners.

Low cost interpretive opportunities, and those that are of interest to potential partners are more likely to be implemented. Also, components of the interpretive network should be chosen and conceptually designed so they work in the context of a larger network, but also stand alone, so opportunities can be developed individually, with small chunks of money.

Staffing:

It is unlikely, in the near future, that any managing agency, including the BLM, will commit staff on a consistent basis, other than volunteer campground hosts, to any interpretive function along the highway. The area is far from the Field Office at Glennallen, so time required for visiting and maintaining the area is already significant. Therefore, the basic interpretive program will have to rely on self-guided activities and self-serve information opportunities at this time

Character of the experience: Currently, driving the Denali Highway is like stepping back into the past and experiencing "real" Alaska. The interpretive program must not detract from the essential character of the area while striving to protect the resources and enhance the recreational experience. Therefore, infrastructure development should be minimal, and should be limited primarily to areas that already bear marks of human activity.

Based on analysis of the key audiences, parameters, and features and resources along the route that were available for interpretation, a concept was developed that meets the management goals of enhancing the recreational experience, fostering a stewardship ethic and increasing support for management policies. It is a concept that fits the situation now, but has flexibility to be modified as necessary to adapt to changes in ownership and development if such changes should occur. The overall concept for the interpretive opportunities along the route is to make visitors more aware of the natural environments and cultural resources along the Denali Highway in such a way that they understand them to the point of valuing what they have to offer and recognizing the susceptibility of those environments and resources to human impacts. If that can be achieved, the visitor is more likely to practice good stewardship, and to support management policies focused on protecting the environments.

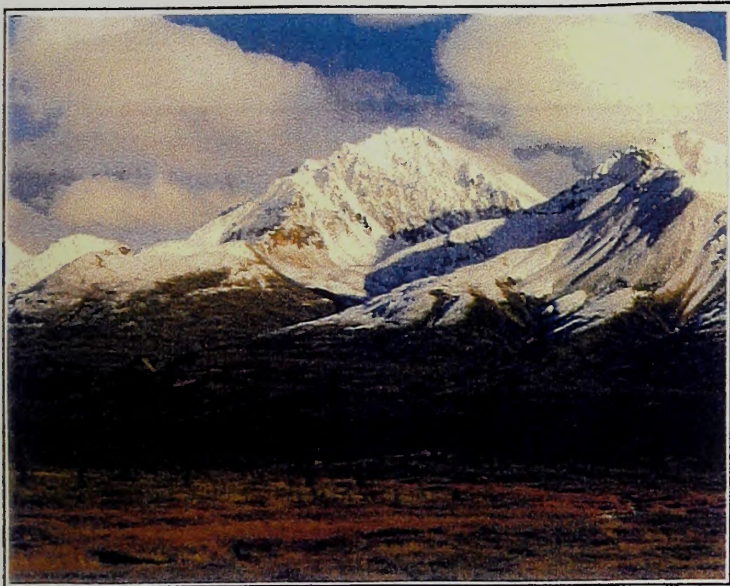
The information sequence prescribed for the network flows from orientation to interpretive overview to detail as the visitor moves along the highway. This is the most effective general sequencing for this type of communication effort because the orientation information allows the visitor to gain a degree of comfort in this unfamiliar environment thus heightening receptivity to the interpretive opportunities. The key features of the information network include unstaffed portal kiosks at each end of the highway that provide overall orientation and thematic overview, 12 clusters of interpretive panels at selected locations along the route, minor orientation panels at three key locations of visitor concentration along the route, an orientation brochure, and user brochures developed for specific user groups. The proposed network also includes two interpretive trails. Figure 6, on page 40, shows approximate locations of the fixed opportunities in the network.

Area Overview and Project Background

Area Overview

The Denali Highway was built in 1957 to provide access to Denali National Park. As it turned out, it also provided access to a spectacular slice of interior Alaska.

1. The road traverses the south side of the towering Alaska Range,
2. offering countless panoramas of the natural landscape of interior Alaska, including taiga, or Boreal Forest,
3. and the vast glacier-carved Maclaren River Valley as viewed from Maclaren Summit.
4. Water is also a dominant feature in much of the landscape, with countless lakes, such as Tangle Lake,
5. and numerous streams and rivers, such as the Nenana River.



1



2



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The vastness of Alaska is evident in the panoramic views along the highway, but a trip into the area offers a lot more. Closer inspection reveals clues that help tell the story of the formation of the land.

6. The Alaska Range speaks of the tremendous internal pressures that pushed the land up. The remaining glaciers are reminders of an age when the uplifted range was sculpted into the shapes familiar today.
7. Eskers, winding elevated ribbons of sand and gravel deposited by rivers flowing through an ice sheet or glacier, speak of the vast ice sheets that once covered the area. Part of the road is built on eskers.
8. Landmark gap, gouged out by ice, is further evidence of the power of those glaciers.
9. And the view along the way contains abundant evidence of glaciation, such as the kettle lakes, braided river channels and moraines visible from McLaren Summit,
10. and of the colonization of this harsh land by hardy trees and other vegetation.



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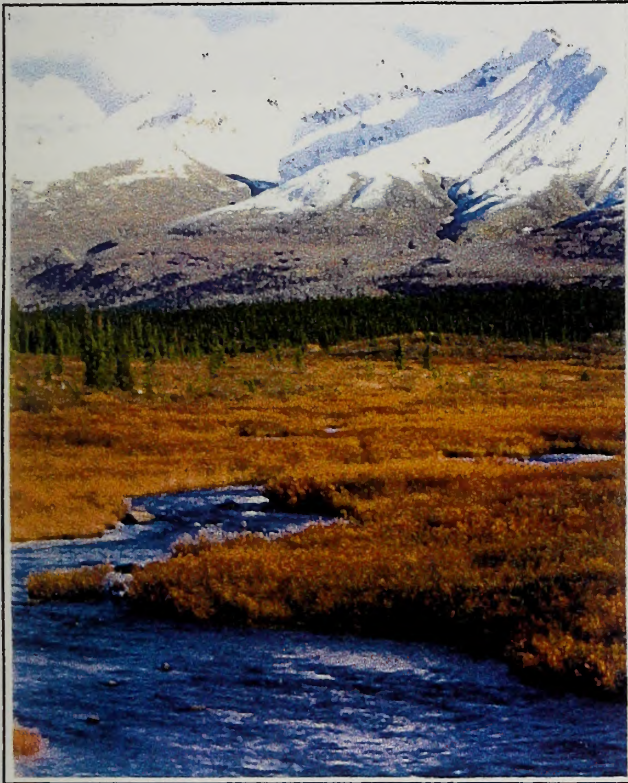


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11. The water and other resources attracted wildlife, as evidenced by the abundance of waterfowl who use the numerous lakes for nesting and resting habitat,
12. and by the numerous beaver dams on the small streams in the area.
13. Those streams often contain grayling and other fish,
14. while shrubs and trees provide cover for a variety of other birds, including ptarmigan.
15. Caribou can often be seen in the area, either foraging, or migrating from summer to winter habitat or back.



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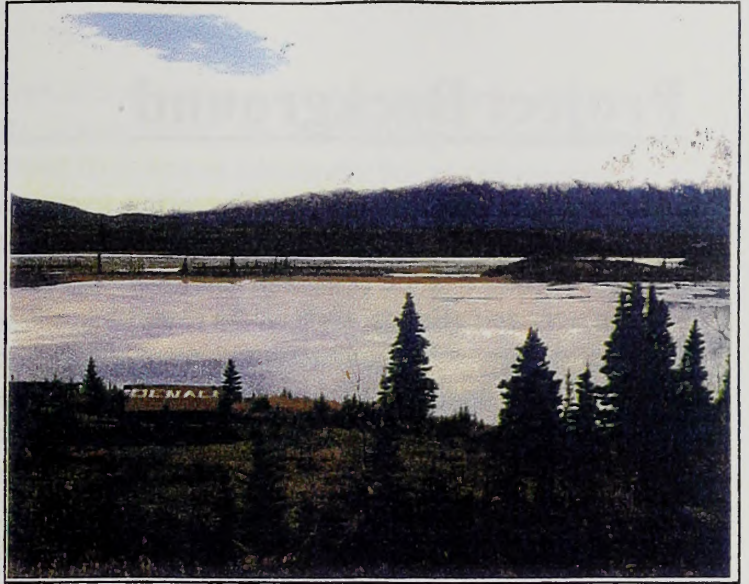
14

Though evidence is not abundant, humans were and still are a part of this natural landscape.

16. Tangle Lakes Archeological District contains hundreds of archeological sites speaking of a time thousands of years ago when prehistoric people used this area to hunt and gather food.
17. More recently, miners scoured the area in search of precious metals. Denali was the name of a mining town located across the river from this site around the turn of the century.
18. To supply the miners, routes were established from towns to the mining camps, and along the way, roadhouses sprang up to serve the travelers. Today, the roadhouses continue to serve travelers to the area. Some are still there to gather food, but many come for recreational pursuits.
19. To manage use and enhance recreational experiences, the Bureau of Land Management has developed recreational facilities and supporting information, such as at this boat ramp.
- 20 & 21. They have also developed some orientation and interpretive opportunities along the way. The role of this plan is to identify additional opportunities to enhance a trip with interpretive information.



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Project Background

Traveling the Denali Highway is like taking a step into Alaska's past. The scene is dominated by the Alaska Range, and evidence of the forces that have shaped Alaska's topography, most notably, evidence of the effects of glaciation and ice sheets, and of the effects of the arctic environment and climate, such as the features resulting from permafrost. The area was used by prehistoric peoples beginning 10,000 years ago in their never-ending quest for food and materials to sustain their lives. To this day, it is still heavily used for subsistence hunting. Evidence of the prehistoric use is substantial, but relatively invisible to the untrained eye. However, some evidence of historic use of the area remains, most notably, the highway itself, and what remains of the Valdez mine. Discovery of gold in the Valdez Creek area caused a rapid and significant change to this area, attracting miners and others around the turn of the century. Eventually, most of the miners departed because of the lack of continued return for their efforts.

The next catalyst for significant change was the building of the highway itself. The Denali Highway, built in 1957 as an access to Denali National Park, traverses the south side of the Alaska Range connecting the communities of Paxson and Cantwell, a distance of 136 miles (see Figure 1). Until the Parks Highway was completed in 1972, the Denali Highway provided the only road access to Denali National Park.

Today, the Denali Highway continues to provide a link between the Richardson Highway and the Parks Highway that is valued by visitors as it allows loop tours originating in either Fairbanks or Anchorage. The road is also valued by residents and travelers alike for its recreational opportunities offered in such a spectacular, relatively remote and wild setting. The area is rich in geologic history, wildlife resources, cultural resources and scenic attractions.

The 300-foot highway right-of-way is managed by the Alaska Department of Transportation and Public Facilities. The land adjacent to the right-of-way is currently managed primarily by the Bureau of Land Management, Glennallen Field Office in Glennallen, Alaska, however, a lot of land currently managed by the BLM has been selected by the state or Ahtna, Inc. but not yet conveyed. The Alaska Department of Natural Resources and Ahtna, Inc. do currently manage some lands adjacent to the right-of-way.

The Bureau of Land Management manages lands to provide the array of appropriate products and services desired by the public at the time, while maintaining the potential for future generations. Recreation opportunities are one of the desired products, especially along the Denali Highway. An interpretive and information network will enhance the recreational experience of many travelers through heightening awareness of safety issues, providing appropriate orientation information, and promoting discovery of cultural and natural history along the Denali Highway.

The Bureau of Land Management also believes that one way to save cultural resources is to educate the public about the value of such resources and the laws governing their protection.

state, is an effective tool in managing those resources because it creates more stewardship by users, thus decreasing management problems. Consequently, the BLM initiated a contract to create an Interpretive Master Plan for the Denali Highway as a blueprint for an information network that will help with education about cultural and natural resources while also enhancing the recreational experience of travelers along the highway.

This report is the culmination of that project. It contains the entire plan, including both the themes to be communicated and the network of strategies to communicate those themes. The methodology used to develop the plan can be found in Appendix A. The background information—goals, audience, parameters, and resource inventory summary—used to derive the appropriate network can be found in Appendix B. Finally, a list of the sources of information used to gather and assess relevant information can be found in Appendix C.

Interpretive Network

Introduction

Theme Hierarchy

Media Prescription

is an effective tool in managing these resources. This document provides information on the Alaska Department of Transportation's efforts to manage these resources.

The Alaska Department of Transportation is responsible for the management of the state's transportation system. This includes the planning, construction, and maintenance of the state's highways, bridges, and airports.

The Alaska Department of Transportation is also responsible for the management of the state's public lands. This includes the planning, construction, and maintenance of the state's public lands.

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Interpretive Network

Introduction
Thematic Hierarchy
Media Prescription

Interpretive Network: Introduction

Introduction

The interpretive network contains two major parts—the key themes or messages to be communicated, and the network of strategies for communicating those themes. The following philosophy was used as a set of guidelines for choosing themes and strategies.

- In general, people are more likely to believe what they read or hear if they can see supporting evidence at the same time. On-site opportunities are effective because visitors can see, firsthand, the visual evidence that supports the interpretive message. Consequently, interpretive opportunities should strive to put visitors in contact with artifacts or features in a way that reinforces the story. In this project, this will manifest itself in the locating of interpretive panels adjacent to features associated with the focus of the panels when appropriate. This does not mean that location of artifacts will be made public.
- People have limited leisure time and unlimited opportunities to spend it, so they must make decisions. People make those decisions on the basis of effort (cost) and reward (benefit). In other words, "What is this activity going to cost in terms of time, money, physical and mental effort, etc.?" compared with, "What benefits am I going to get out of participating?" People tend to determine the cost-benefit ratio for their options, then pick the ones with the best ratio.

Interpretation is optional—people don't need it—so it must compete with all other leisure-time options for a slice of a visitor's time. Consequently, interpretive opportunities must be perceived as low effort for high reward. If exhibits are perceived to be high effort and/or low reward—hard to read, hard to understand, boring subject, technical headings, small text, or any of a myriad of other factors—the relationship between perceived effort and perceived reward may reach a point where the opportunity cannot compete, and potential visitation drops. In the case of this project, this point should manifest itself more prominently in the design of panels and other strategies, but it does play a part in the location of interpretive opportunities at places people are likely to stop for other reasons, and in the decision to clump panels together. It is also the reason management information should be presented subtly within the context of other interpretive strategies rather than having an opportunity dedicated to management.

- Artifacts, specimens, features and other sensory stimuli should be the focal point of the visitor experience. Information should be subordinate to and complement these stimuli rather than trying to compete for the visitor's attention. That is the rationale behind using low-angled interpretive panels when interpreting outdoor features. In such instances, the panel is simply a label for the feature, and is designed and positioned to allow clear visual access to, and focus on, the feature.

- People are receptive to different types of information at different places. For example, at places where people first access the Denali Highway, visitors are more interested in functional orientation information. They will be more interested in interpretive information once they are oriented to their environment. Therefore, it is important at such locations to orient visitors, and to dispense interpretive information that can be used later.
- In order to motivate visitors to take time and expend effort, effective communication networks typically have the following types of components:

Functional Orientation: This is information that allows a visitor to function in your environment, and includes a listing and location of opportunities and activities, location of restrooms and other amenities, and where to go for more information. A map is a basic and common functional orientation device. Such orientation is a critical element because feeling comfortable in an unfamiliar environment is essential in order to be receptive to interpretive information. Since functional orientation is a need, it must be offered at the *beginning* of a visitor's experience, in such a way that it is easily accessible to *all* visitors, whether the site or facility is crowded or not. In the case of the visitor center, this will translate into a layout that has restrooms and orientation information available immediately upon entering the facility.

Interpretive Information: This is the focal point of the communication system and consists of information that helps the visitor understand the stories you wish to tell. A typical interpretive network consists of the following components:

Grabbers: These are easily accessible, high reward opportunities that are intended to grab a visitor's attention, pique curiosity, and attract the visitor into other, higher-effort opportunities. For example, table teasers at restaurants should grab a visitor's attention and entice them to visit the portal facility. The opportunities in the portal facility should not only provide some detail, but they should also function as "grabbers" to entice visitors to stop along the Denali Highway to explore the surrounding environment.

Thematic Orientation or Overview: This functions like the executive summary in a report—it gives the visitor the big picture so the details will make sense. It usually occurs just after functional orientation, and is critical to the overall effectiveness of the communication effort because it is an initial organizer for all subsequent information. This is the place in the interpretive experience with the maximum number of participants at a single place, so it should also communicate the key themes so visitors will understand the basic messages even if they do not visit every exhibit.

Holders (Detail): These are higher-effort, often less-visible opportunities that provide much of the detail in an interpretive network. In most museums and

provide much of the detail in an interpretive network. In most museums and interpretive centers, this type of opportunity, in the form of exhibits, constitutes the body of the visitor's experience. In this situation, explorer's guides, clusters of interpretive panels and interpretive trails would be more typical of holders.

These concepts, as a whole, overlain on a physical landscape, results in a network with grabbers in prominent places to attract users into the information network; opportunities that provide functional orientation and overview located in easily accessible locations at the beginning and at key destination points of the visitor experience; and the meat of the interpretive experience, the detail, concentrated in single facilities, site-specific opportunities, or both. In the case of the Denali Highway, this philosophy would manifest itself with area orientation available at portal facilities, site orientation available at stops along the way, and interpretive panels at points of interest that tell a part of the story while encouraging visitors to stop at other interpretive opportunities. A flow chart of a typical interpretive network experience is depicted in Figure 3. The interpretive network for the highway was developed under this philosophy.



Grabber

Interpretive information in these locations serves to attract visitors and send them to areas with interpretive opportunities. Grabbers are located in areas of high visitor concentration, are highly visible, and are attention-getting. They are designed to pique interest, not to provide detail. They are often placed outside the Project Area, at sites where visitors may be making decisions about their trip. Appropriate media include signs, photo panels, table teasers, etc.

Overview/Orientation

These sites are designed to give visitors orientation information about available opportunities, where they occur, and how to become involved. Information here also gives an overview of the various subjects and stories visitors can learn about. These sites are not expected to hold visitors for a long time, but to give them the necessary information and send them out to participate in various options elsewhere. They may send people directly to individual interpretive activities, or to an interpretive hub. Appropriate media include signs, brochures, photo panels, etc.

Interpretive Hubs

These sites are hubs of activity, providing a variety of recreational and interpretive opportunities. They are generally areas of high visitor concentration, with many options available, including recreational activities, overview information, and in-depth interpretive opportunities. Visitors may choose to visit this site and stay for a length of time, or they may choose to move on from this location to one of the individual activities available. Examples of locations that can function as interpretive hubs are visitor centers, campgrounds, recreation sites, etc.

Holder/Detail

These are in-depth interpretive opportunities, providing visitors with detailed information in a location or format that requires higher effort and more time. They can be located in areas of low visitor concentration, as well as in more highly visited sites. These opportunities provide the meat of an interpretive experience. Examples include interpretive trails, auto tours, brochures, audio tapes, interpretive center exhibits, interpretive panels, etc.

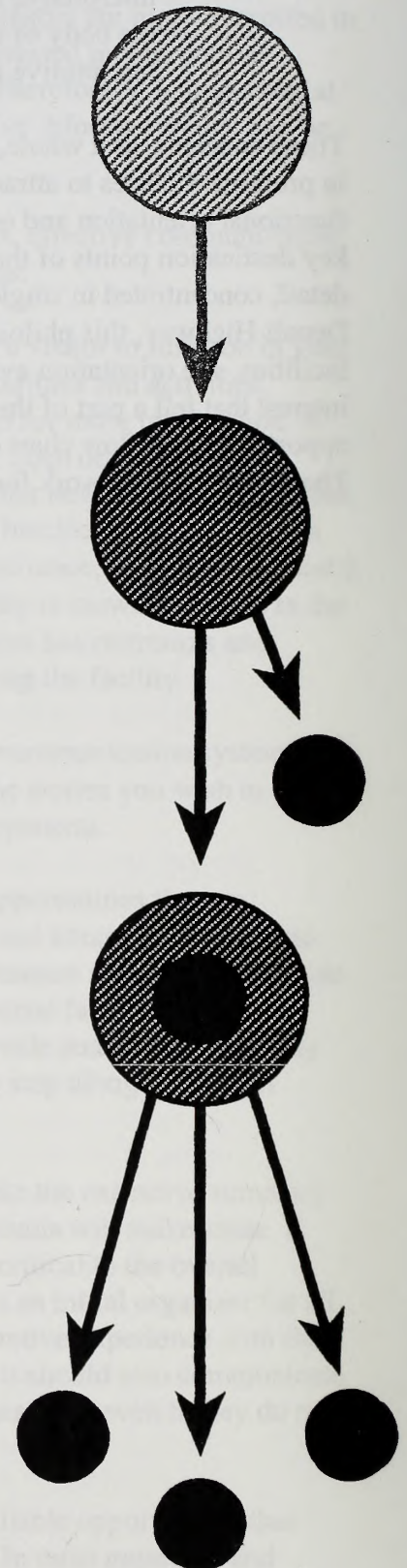


Fig. 3: Interpretive Opportunity Types

Interpretive Network: Themes

Introduction

Themes are messages or concepts that help people understand what they are seeing or learning about. To be of the most use, themes must fit the following criteria:

1. **The evidence, particularly visual evidence, must support the theme.** For example, eskers can be used to support the concept that past events have helped to shape the environment.
2. **The communication of the message must, in some way, help managing agencies to achieve their missions.** As an example, effectively communicating the idea that the area is sensitive to human disturbance may make people more willing to be careful and to support policies aimed at protecting the environment.
3. **The concept must be transferrable.** To be transferrable, a concept must be broad enough for visitors to apply it to other situations. This is valuable to visitors, who can take the concept elsewhere and use it to understand another part of their world. A specific theme may be easy for program developers to work with, but be of minimal use to visitors. As an example, concepts specifically about managing an area for caribou will help them understand the relationship of that species to that area, but the concept that the key to managing wildlife is to manage habitat gives visitors a tool to help them understand wildlife management in other parts of the country.
4. **The concept must provide a basis for understanding and appreciating an area.** People will tend to protect what they understand and appreciate.

NOTE: There has been no attempt to include all possible stories, only to create a framework into which all stories can fit.

In looking at the goals of the interpretive program, a progression of messages seems to suggest itself (see fig. 4). In essence, we want the visitor to value the resources along the Denali Highway, to understand the susceptibility of those resources to human disturbance, to understand how easy it is for humans to cause impact, and to understand the connection between management policies and protecting this valuable resource so the visitor will abide by and support those management policies while still using the resource in a safe and appropriate manner. The following set of themes and sub-themes was derived with that progression of messages in mind.

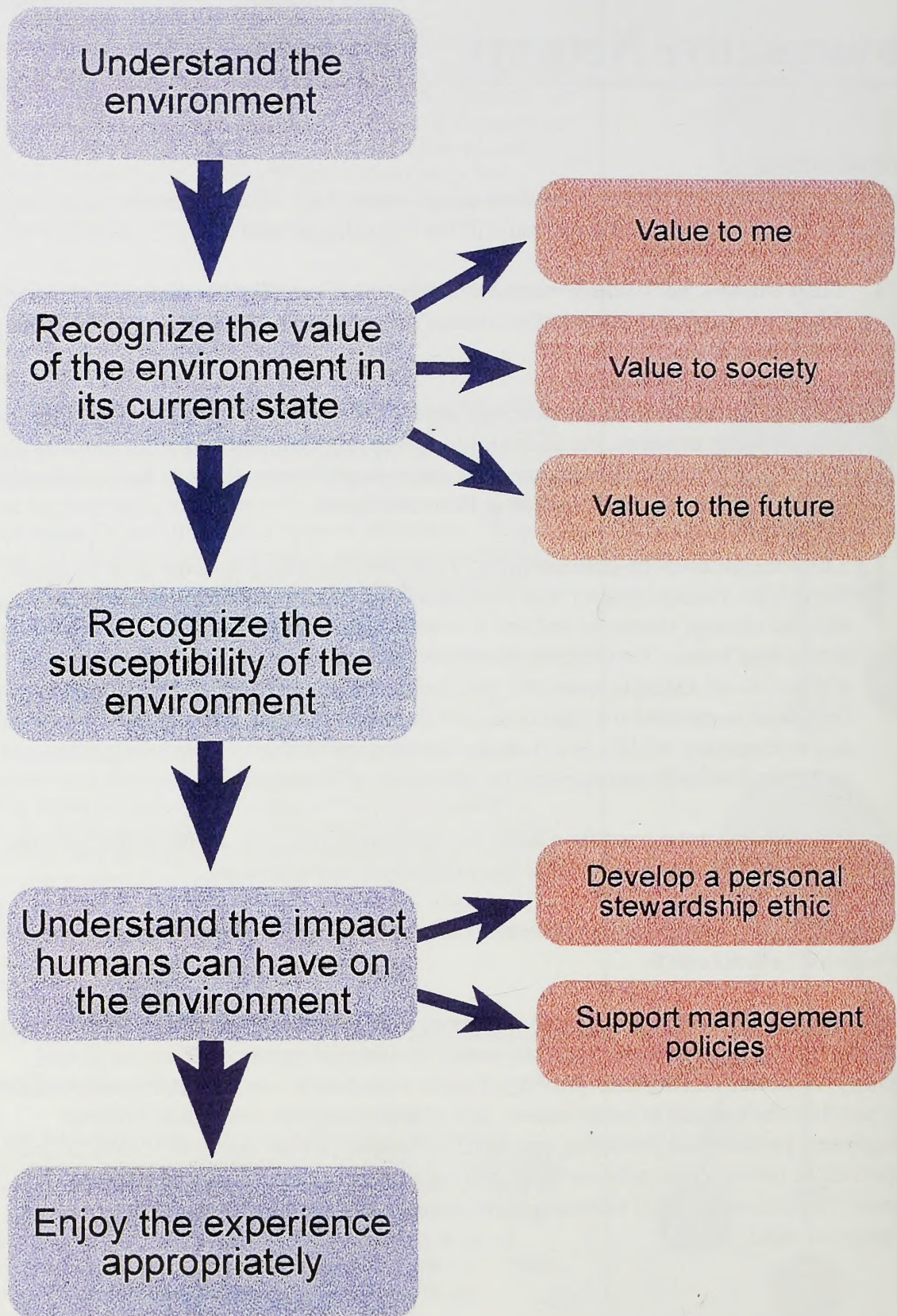


Fig. 4: Flow of Themes

Themes and Sub-themes

1. The Denali Highway passes through a unique and interesting land.

- 1-1. The landscape you see is the product of a unique combination of many natural events and processes working over time.

Examples of Supporting information:

- a. Permafrost is a factor affecting this area.
- b. Ice sheets and glaciation have helped to shape the landscape and vegetation patterns.
- c. Many geologic processes have occurred to create the scenery and topography in this part of Alaska.
- d. The vegetation patterns are due to a combination of factors including substrate, aspect and climate.

- 1-2. Life's rhythms in Alaska are different from elsewhere.

Examples of Supporting information:

- a. Temperature and temperature ranges are more extreme than most places.
- b. The pattern of daylight and darkness is different from most places, resulting in unique patterns of periods of activity.
- c. The web of life is extremely simple, with population extremes at each end.

- 1-3. Flora and fauna of this part of Alaska have special adaptations that allow them to live in this harsh environment.

Examples of Supporting information:

- a. Animals have lower surface area to volume ratios.
- b. Animals have smaller appendages.
- c. Many plants grow very close to the ground.
- d. Many animals migrate.
- e. Some animals hibernate, or become dormant in other ways during winter.

- 1-4. This area is relatively unique in the world in that human impact has been relatively insignificant. It is undisturbed habitat in a world of disturbed environments, therefore, it offers a wonderful opportunity to take a step into the past.

Examples of Supporting information:

- a. Because it is remote and has been relatively inaccessible, few humans lived here in the past.
- b. Because of the remoteness and harsh conditions, few humans settled here in the past. Few live here now because most of the land is publically owned.

2. The Denali Highway and surrounding lands are valuable in their current state.

- 2-1. This area, as it is, offers resources and opportunities valuable to you.

NOTE: Different individuals will relate to different values. Therefore, in order to support this theme it will be necessary to show many different values, and to show connections to many places in the world, which may be home to visitors. For example, showing connections between waterfowl of the area and waterfowl of wildlife areas in the lower 48 will help to show the personal value to those people who live near, or have visited, those other wildlife areas.

- 2-2. The array of resources and opportunities currently available from this area is valuable to today's society.

Examples of Supporting information:

- a. The area offers an easily accessible wilderness-like experience.
- b. The area offers the relatively unique experience of driving in an alpine environment.
- c. The area offers solitude.
- d. The area offers a wide variety of recreational activities within easy drive of the major population centers.
- e. The area supports a wide variety of wildlife, which allows for both consumptive and non consumptive recreational activities.

- 2-3. The value of this area, as defined by society, has changed over time.

Examples of Supporting information:

- a. The first people came in search of food.
- b. People have come in search of precious minerals (gold).
- c. People still come for food and minerals, but many now come in search of solitude, and related recreational experiences.
- d. Some come to live and work in this kind of environment.

- 2-4. Maintaining this area in its current state allows for the products we value now, but maintains the widest array of options for future generations.

3. This area has fragile elements that can be damaged through human use, so it is managed to supply desired services and products while balancing the needs of the present with the potential for the future.

3-1. Different parts of the land are more or less susceptible to human disturbance.

Examples of Supporting information:

- a. Even a small number of people can damage some resources. Therefore, to maintain those resources, public use is constrained in some areas.
- b. Humans' ability to cause significant impact is growing exponentially with improved technology, increasing numbers, and increasing ability to travel. Therefore, rules and regulations are necessary to protect the environment.
- c. The short growing season, permafrost, low evaporation rate (keeping land wet), shallow plant roots, and slow vegetation rate make the environment susceptible to disturbance.

3-2. This area is important to many people for different reasons and so is managed to balance the needs as much as possible.

Examples of Supporting information:

- a. The area is important to some people as part of their food gathering area. Thus, hunting and fishing is permitted.
- b. The area is important to some people for mineral extraction.
- c. The area is important to some people for recreational experiences that are part of their quality of life.
- d. The area is important to some people for its role in tourism.
- e. The area is important to some people for food.
- f. The area is important to all people for its value related to research and study.

4. The Denali Highway offers many recreational opportunities, but also many hazards.

4-1. This area contains many hazards, however, precautions can be taken to avoid these hazards.

4-2. The area contains a variety of recreational opportunities compatible with minimal disturbance to the natural environment.

Interpretive Network: Media Prescription

Introduction

The overall network includes the orientation system necessary for users to engage in desired activities along the highway, including interpretive opportunities, the interpretive network and infrastructure required for the recommended strategies. Some infrastructure, such as portal facilities, will serve both the orientation system and the interpretive network. This section overviews each system separately, then describes the recommended infrastructure to support the network followed by descriptions of each component in detail.

Orientation System Overview

The basic orientation system for the Denali Highway focuses on giving a general area overview at access points to the highway, providing more specific information along the way in the form of a map/brochure, providing more specific area orientation at key stops along the way, and providing activity orientation to key user groups. The system has the following major components:

- **Denali Highway orientation panels** located in portal kiosks at either end of the road to provide orientation to the Denali Highway.
- **Parks or Richardson Highway orientation panels** located in the portal kiosks at either end of the Denali Highway. They will orient travelers to the area north and south on either the Richardson or Parks Highway depending on the location of the portal facility.
- **Area orientation panels** at key areas of visitor concentration along the way, such as at the wayside located at the entrance to the Tangle Lakes Campground and at Brushkana Wayside, located at the entrance to Brushkana Campground.
- **River orientation panels** at key access points to the rivers accessed from the highway.
- **A general brochure** with map providing orientation to the entire Denali Highway. This brochure will be available in brochure dispensers at the portal facilities and area orientation panels, and lodging and eating establishments along the way.
- **Specialty brochures** designed specifically for orienting specific user groups to their activity, such as fishing, hunting, ATV riding, snowmobiling or hiking. Also, specialty brochures designed specifically for orientation to a specific area and/or use, such as the Trail Guide to the Tangle Lakes Archaeological District.

Interpretive Network Overview

The interpretive network follows the philosophy noted in the previous section. It has grabbers at the access points to the highway as a mechanism for getting people interested in the stories, and more detailed interpretive opportunities located along the route. The interpretive network will contain the following key components:

- **Table teasers** in eating establishments within and adjacent to the Project Area. These are intended to grab a visitor's attention and interest so they are more likely to stop at the interpretive panel clusters along the highway.
- **Visual scavenger hunt** to be distributed within the basic orientation map/brochure for the area.
- **Interpretive overview panels** at the portal kiosks located at the access points to the highway. These provide an overview of the key stories told along the way.
- **Interpretive panel clusters** at key sites along the route.
- **Points of interest booklet** that provides information on points of interest along the route. This provides more information and more detail than the interpretive panel clusters but less than an Explorer's Guide would contain.
- **Short interpretive trails** at key sites along the way. These trails are designed to give a user more detailed information about a topic already covered within an interpretive panel cluster. For example, the panel cluster at Maclaren Summit includes a panel on tundra. We also recommend a short interpretive trail, on a boardwalk with rails, at that site that focuses on tundra and the wildlife that lives in that biome.

An **Explorer's Guide to the Denali Highway** would also be an effective strategy, however, it may be a strategy better left to the private sector as the lead, with the BLM providing input and assistance. If visitation and circumstances change to the point of justifying a staffed, enclosed facility, exhibits and a video could be used to provide the interpretive overview at the portal facilities. For the time being, the level of development should match the character of the road, the visitation levels and the constraints of developing and maintaining an interpretive network along the Denali Highway.

Figure 5 depicts the conceptual network containing both orientation and interpretive opportunities. The diagram is only intended to show concept, so it focuses on general locations and sequencing rather than exact locations. Exact locations of portal facilities, area orientation panels and clusters of interpretive panels, are indicated in the section describing each component.

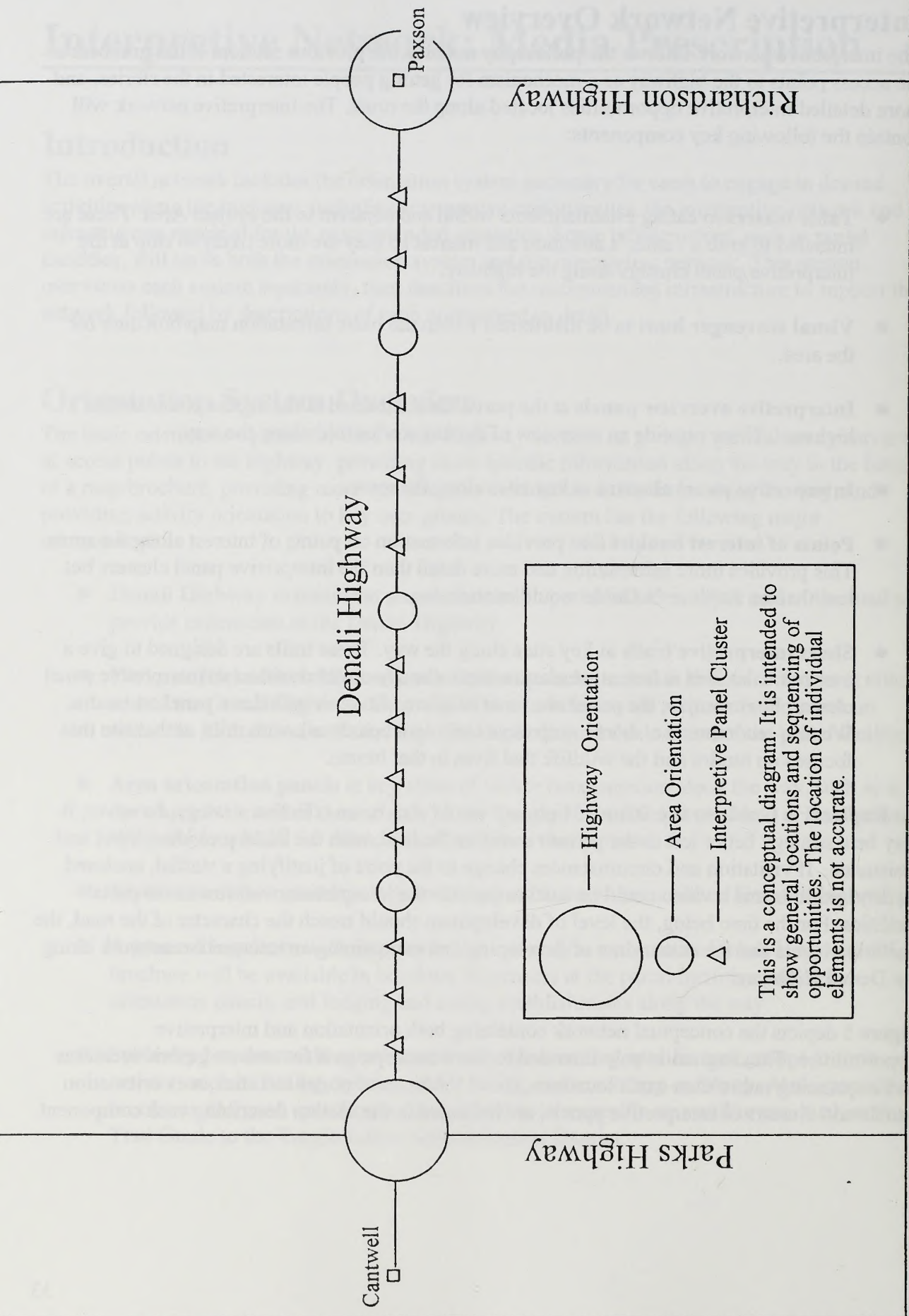


Figure 5 - Conceptual Network

Network Components: Supporting Infrastructure

Portal Kiosks

Overall Function: This kiosk should provide basic orientation to the Denali Highway and to the Parks or Richardson Highway depending on location, and an overview of the interpretive stories told along the highway. It should also distribute the orientation brochure and activity brochures. Ideally, this facility would serve highway traffic during the summer, and snowmobile and other travelers during the winter.

Ideal Location: Based on a recent survey, it seems as if a large majority of visitors are only traveling a short distance along the Denali Highway before turning back. To get the most value out of this strategy, a wayside should be developed at or very near the junction of the Denali Highway and the Richardson Highway, and another at the junction of the Denali Highway with the Parks Highway. Given the function of providing orientation for travelers on either highway, the best location is one where there is good visual access for travelers on the main highways. Therefore, the best location for the eastern facility is probably on the southwest corner of the intersection with the Richardson Highway. The best location for the western facility is probably on the northeast corner of the intersection with the Parks Highway.

Overall Description: Given the current set of constraints, this should be an unstaffed kiosk with interpretive and orientation panels located within an open, but sheltered structure. If visitation and circumstances change significantly, this could evolve into a staffed, enclosed Visitor Services Center with such opportunities as exhibits, a video, and possibly an interpretive trail. For the time being, the level of development should match the character of the road, the visitation levels and the constraints of developing and maintaining an interpretive network along the Denali Highway.

Interpretive/Informational Opportunities: The kiosk should contain the following strategies:

- **Denali Highway orientation panel**
- **Thematic Overview panels**
- **Richardson or Parks Highway orientation panel**
- **Changeable display board:** The changeable display board should have information on hours of operation, scheduled activities such as talks, and special events or notices.
- **Set of brochure dispensers:** These contain the orientation brochure and the activity-specific brochures.
- **Safety information panel**

Comment: This is a good opportunity for a public/private partnership between BLM, the Alaska Department of Transportation, and the owners of Paxson Lodge on the east end, and between the same agencies and the town of Cantwell on the west.

Waysides

Overall Function: Waysides should provide restroom facilities as well as orientation information at a minimum.

Ideal Locations: The best places for waysides in general are at existing areas of visitor concentration. Additionally, given the sparse number of rest areas along the way, spacing is a key consideration. Consequently, we recommend waysides in the following locations:

- Entrance to the Tangle Lakes Campground (this one is already planned)
- Clearwater (this one exists but needs to be upgraded)
- Entrance to Brushkana Campground

Overall Description: These facilities simply provide parking, restrooms, and orientation information.

Interpretive/Informational Opportunities:

At a minimum, the wayside should contain the following:

- **Area orientation panel**
- **Set of brochure dispensers:** These contain the orientation brochure and any appropriate activity brochures.

The waysides could also contain the following opportunities:

- **Changeable display board:** The changeable display board should have information on special events or notices and road conditions.
- **Safety information panel**
- **Thematic Overview panels**

Interpretive Pullouts

Overall Function: These simply provide access to interpretive panels and trails.

Locations: Various locations along the highway. Specific locations are provided in the description of individual components.

Overall Description: A pullout long enough and wide enough to accommodate several vehicles at the same time.

Interpretive/Informational Opportunities: Depends on the pullout. At a minimum, these will contain interpretive panel clusters.

Network Components: Summary List

The following is a list of all components recommended for this interpretive and information network and described in the following section. Figure 6, immediately following this list shows the location of the fixed strategies in the network.

Non-fixed Strategies

- **A general brochure** with map providing orientation to the entire highway. This brochure will be available in brochure dispensers at the portal facilities and area orientation panels, and lodging and eating establishments along the way.
- **Specialty brochures** designed specifically for orienting specific user groups to their activity, such as fishing, hunting, ATV riding, snowmobiling or hiking.
- **Table teasers** in eating establishments within and adjacent to the Project Area. These are intended to grab a visitor's attention and interest so they are more likely to stop at the interpretive panel clusters along the highway.
- **Visual scavenger hunt** to be distributed within the basic orientation map/brochure for the area.
- **Points of interest booklet** that provides information on points of interest along the route. This provides more information and more detail than the interpretive panel clusters but less than an Explorer's Guide would contain.

Fixed Strategies by location

MP 0.0 Denali and Richardson Highway Junction Portal Kiosk

- Denali Highway orientation panel
- Richardson Highway orientation panel
- Thematic overview panels
- Safety information panel
- Bulletin board
- Brochure holder for the orientation brochure
- Brochure holders for the activity oriented brochures

MP 7.5 Summit Lake Overlook

- Interpretive Panel Cluster

MP 20.2 Tangle Lakes Overlook

- Interpretive Panel Cluster

- MP 21.6 Tangle Lakes Wayside:**
- Area orientation panel
 - Brochure holder for Tangle Lakes Trails brochure
 - Brochure holder for the Bear Facts brochure
- MP 21.6 Tangle Lakes Boat Launch**
- Tangle Lakes/Delta River orientation panel
 - Brochure holder for the Delta River brochure
- MP 21.7 Delta Wayside Boat Launch**
- Tangle Lakes/Delta River orientation panel
 - Gulkana River orientation panel
 - Brochure holder for the Delta River brochure
 - Brochure holder for the Gulkana River brochure
- MP 22.4 Landmark Gap Viewpoint**
- Interpretive Panel Cluster
- MP 37.0 Maclaren Summit Wayside**
- Interpretive Panel Cluster
 - Tundra Interpretive Trail on a boardwalk with rails
- MP 49.5 Waterfowl Lakes Overlook**
- Interpretive Panel Cluster
- MP 55.0 Clearwater Wayside**
- Area Orientation Panel
- MP 59.5 Glacial Features Overlook**
- Interpretive Panel Cluster
- MP 71.8 Susitna River Overlook**
- Interpretive Panel Cluster
- MP 84.5 Valdez Mine Overlook**
- Interpretive Panel Cluster
- MP 93.0 Hungry Country Overlook**
- Interpretive Panel Cluster
- MP 105.0 Brushkana Wayside**
- Area Orientation
 - Boreal Forest Interpretive Trail
- MP 111.0 Boreal Forest Overlook**
- Interpretive Panel Cluster

MP 116.0 Nenana River Overlook

- Interpretive Panel Cluster

MP 130.0 Mountains Wayside

- Interpretive Panel Cluster

MP 135.0 Denali and Parks Highway Junction Portal Kiosk

- Denali Highway orientation panel
- Parks Highway orientation panel
- Thematic overview panels
- Safety information panel
- Bulletin board
- Brochure holder for the orientation brochure
- Brochure holders for the activity oriented brochures

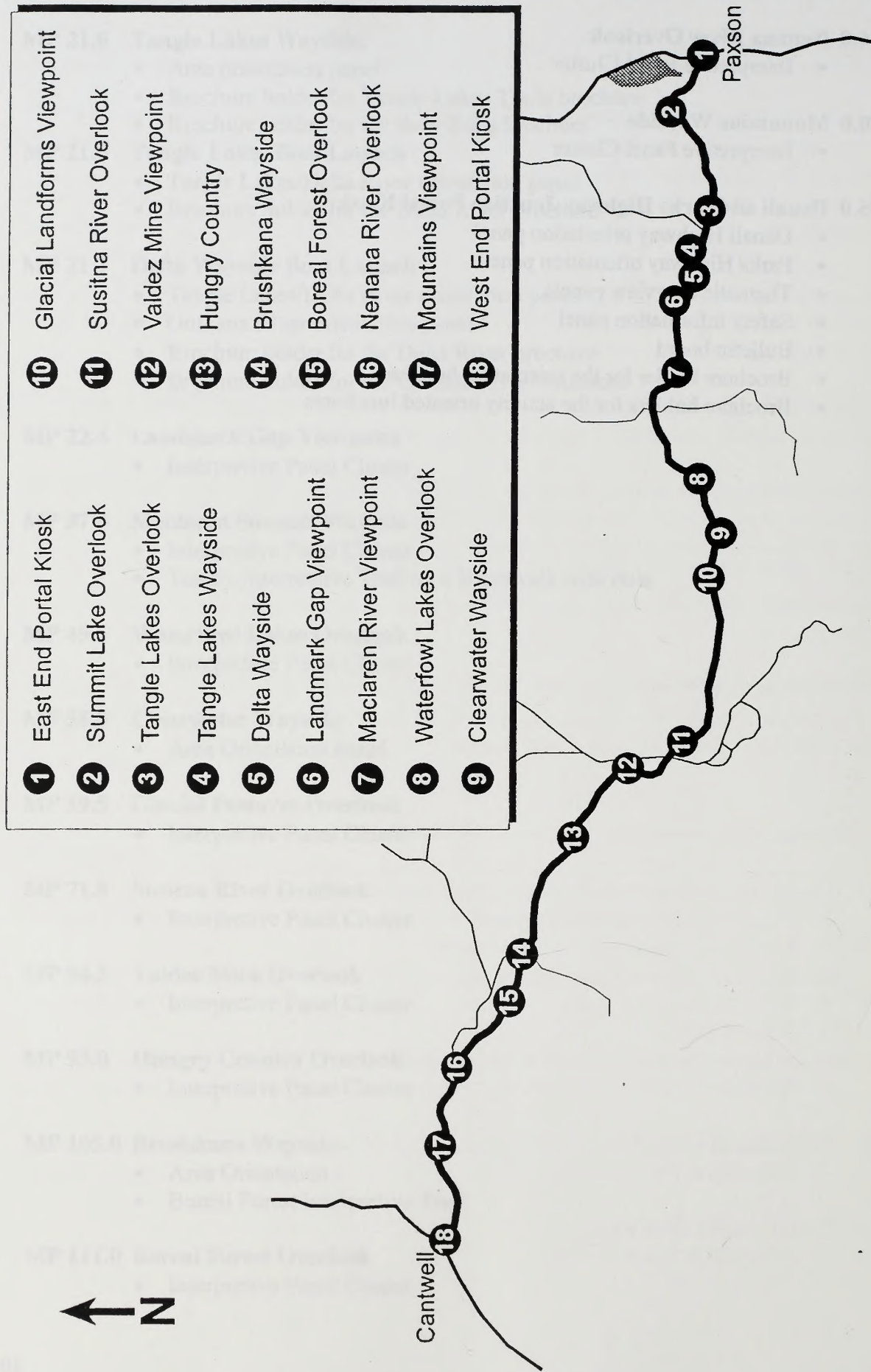


Fig. 6: Location of Fixed Opportunities

Network Components Descriptions: Non-fixed Strategies

Orientation Brochure

Function:

This strategy should function in much the same way as the highway orientation panel—provide basic orientation to the highway and an overview of the interpretive stories told along the way—but it can provide more detail, and provide it at the traveler's fingertips.

Note: The Denali Highway currently has an existing map/brochure of this type that does a good job of orienting the visitors, and can be used for the present. Identification and description of the strategy is included to ensure that readers understand that it is a key part of the network, and to provide additional direction when it is upgraded.

Objectives:

After interacting with this opportunity, visitors will:

- be able to find any opportunity or service located along the highway;
- feel comfortable in their ability to find their way;
- feel like spending some time on the Denali Highway;
- be aware of all the interpretive and recreational opportunities along the route;
- be aware that the key interpretive opportunities are fully accessible.

Description and Concept:

This should be similar to the current brochure providing orientation to the Denali Highway.

Note: Simple signs denoting point of interest could be put in at locations referred to in the brochure.

Activity Brochures

Function:

These publications are intended to provide relevant orientation, rules and regulations, and other necessary information for a specific user group. Interpretive information would be offered as a supplement to the activity information. User groups for whom a brochure should be developed include hunters, anglers, snowmobilers, ATV users, *boaters and hikers. In addition, a brochure should be developed highlighting *trails in the Tangle Lakes Archaeological District (TLAD).

**Note: Brochures already exist for boaters on the Delta or Gulkana River. Also, information is available on trails in the TLAD, however, that publication needs to be reworked into a more user-friendly brochure.*

Objectives:

The specific objectives will change with the activity, however, every guide will have the following general objectives. After interacting with this opportunity, visitors will:

- be able to find designated access points to their desired activity;
- feel comfortable in their ability to find their way;
- be aware of key rules and regulations relevant to their desired activity;
- be aware of all hazards and safety information relevant to their activity;
- be able to plan a safe trip while engaging in their desired activity;
- be aware of the fragility of the ecosystems and of proper stewardship practices relevant to their desired activity;
- be aware of the other uses and users of the resources and of that other users are entitled to the resources also, as dictated by management;
- be aware that use restrictions are tied to protection of the environment, and therefore, tied to maintaining the quality of their desired activity.

Description and Concept:

These guides also have different topics, but again, certain design elements are critical if the guide is going to be user-friendly. Specific design criteria include the following:

- The initial focus of the guide is on all the general orientation information necessary for the user to have a quality recreational experience. This includes camping/lodging facilities, amenities, etc.
- Information should be arranged by trips and tours, if appropriate, that are selected to provide a "menu" of opportunities organized by area, time limitations and difficulty.
- Information for each trip/tour needs to include all necessary information for partaking in that excursion. This would include a map, time required, difficulty, hazards, best time for trip, and gear to take.
- Interpretive information should be subordinate to functional orientation, and to the activity. In other words, the designer must recognize that these users can have a quality experience without interpretation.
- Interpretive information, if included, should be keyed primarily to general concepts that are applicable all along the route, and to places where the user is likely to stop.
- It must be of a size that is easy to carry and use while engaging in the activity.

Comment:

Activity-oriented visitors need orientation information specific to their activity, and will actively seek out and use such information. Once they have such information, they are much more receptive to interpretive opportunities as long as those opportunities don't interfere with their chosen activity. Consequently, coupling interpretive information with orientation information makes it easily accessible. Also, keying that information to locations where the visitor is likely to be most receptive is effective. For example, along a trail, keying interpretive information to viewpoints, places where the hiker is likely to rest, and eye-catching cultural and natural features is likely to be effective.

In summary, these guides serve the dual purpose of providing functional orientation for activities already popular within the Denali Highway corridor, and providing interpretive information as a value-added commodity.

Table Teasers

Function:

This strategy is intended to pique interest in the interpretive opportunities associated with the Denali Highway. They are typically available at dining tables for visitors to browse while waiting for or eating food.

Objectives:

After interacting with this opportunity, visitors will:

- be aware that the Denali Highway contains interesting cultural and/or natural history, and opportunities to learn through interpretation.

Note: Specific objectives would depend on the focus of the specific table teaser. In general, the intent is not to pass on key interpretive information, rather it is to attract visitors into the information and interpretive network where such communication can take place more effectively.

Description and Concept:

The actual device for containing the information can vary depending on the setting in which it is being used. Among the more popular and effective are place mats and 1-2-page leaflets encased in plastic (laminated) to protect against dirt and stain from frequent handling. No matter what the medium, the basic concept is to use interesting bits of information to entice visitors into exploring and learning about the Project Area. Consequently, the device must not only contain "tidbits" specific to the area, but must also tell visitors where they can get more information. The possibilities are endless, but the goal is always to give people something to look at while they wait for their meal in order to inspire them to visit a new place and/or learn more. One possible design concept is depicted in Figure 7 on the following page.

Comment:

In general, the ideal time to communicate with a traveler is when the recipient does not have to expend much effort to access the information. While people are waiting for food to be served, they can easily reach out and browse through information that is sitting only an arm's length away. Visitors are likely to spend time reading in this situation because they are tied to the location until their meal is completed.

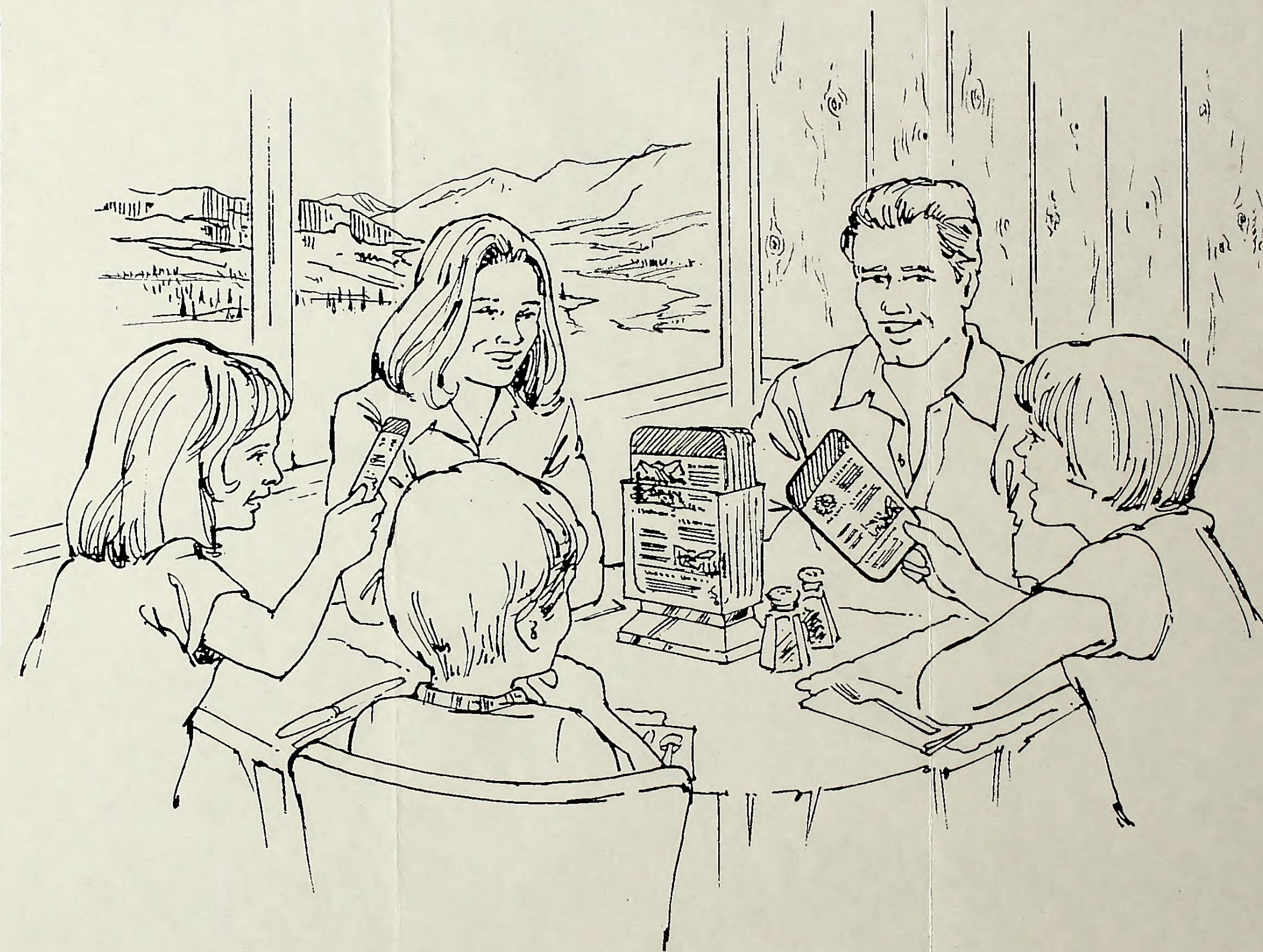
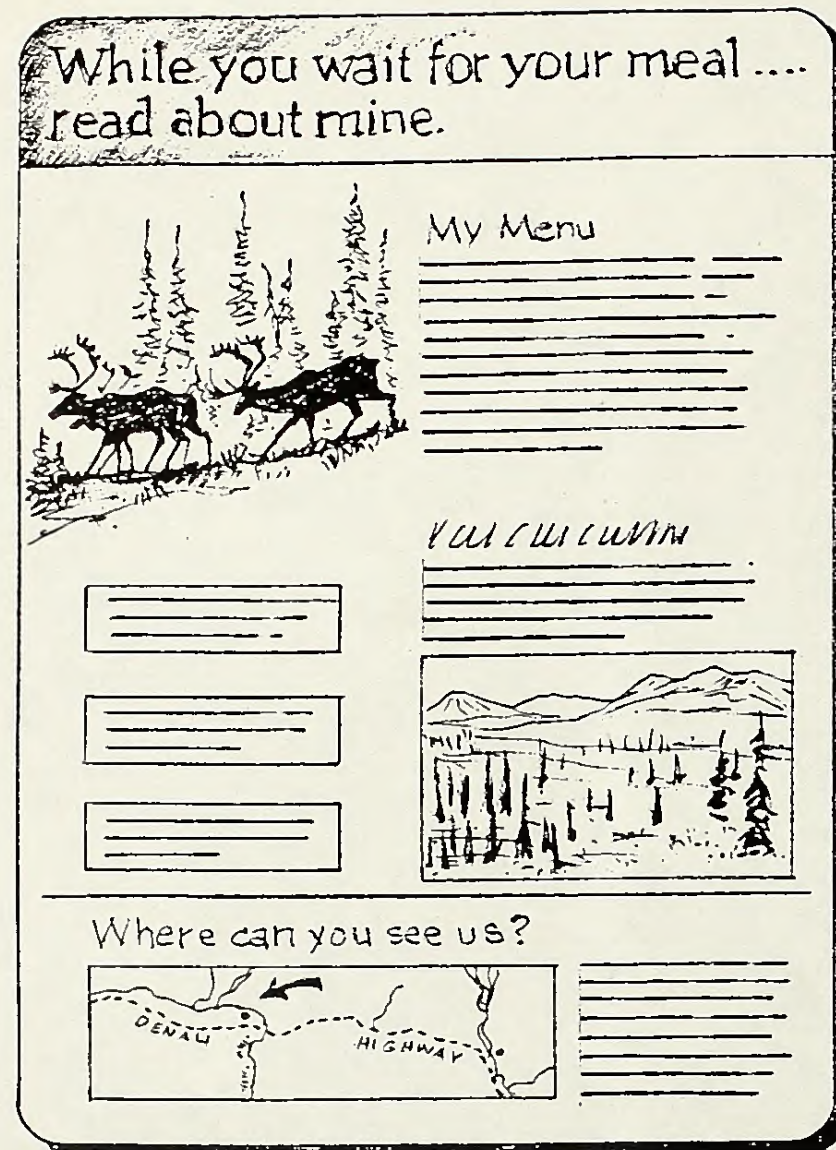


Fig. 7 Table Teasers Sketch

Visual Scavenger Hunt

Function:

The purpose of the scavenger hunt is primarily to encourage visitors to visit all the sites with interpretive opportunities and to take advantage of those opportunities. Providing interpretive information is not its primary purpose.

Objectives:

After interacting with this opportunity, visitors will:

- be more aware of interpretive opportunities and unique features along the Denali Highway;
- want to visit all the key interpretive features and opportunities.

Description and Concept:

This is an interpretive strategy designed to focus attention on different aspects of the interpretive experience, and to encourage travelers to visit all parts of the interpretive network by asking them to find various features or exhibits throughout the facility, site and highway corridor.

Points of Interest Interpretive Guide to the Denali

Function:

This publication is intended for use by the casual explorer to provide an additional level of detail beyond that provided by the interpretive panels.

Objectives:

After interacting with this opportunity, visitors will:

- be satisfied with the experience, but interested in obtaining more information about the cultural and natural history along the highway, and perhaps in other parts of Alaska;
- know all the key themes communicated within the network.

Description and Concept:

This strategy is designed to be used by the casual explorer so the information should be selected accordingly. For example the interpretive trails and short day-hikes should be included, but longer hikes should just be mentioned, with a reference as to where additional information can be obtained.

The guide should include the following functional orientation information, organized and arranged to make trip planning easy:

- Map of the area with trails, travel routes, campgrounds, features, recreational opportunities and interpretive opportunities highlighted.
- Services, such as gas, food, lodging.
- Trail information, such as length, difficulty, hazards, highlights, time required for a

hike, etc.

- Auto travel information, such as length, hazards, highlights, etc.
- Information on other recreational opportunities that would appeal to the casual explorer.

But this guide should go beyond the "Here it is -- have fun" level by providing interpretive information. The orientation information is necessary for people planning a hike or drive, and should therefore be the first information about the opportunity. This should be followed by information about the natural or cultural history along the route; information selected to convey or reinforce one or more of the themes recommended in the interpretive plan. The interpretive information should also contain suggestions on where a visitor can go within the corridor for a similar experience, or for more information on the subject. All the information must be organized into a *user-friendly* guide, or the guide will not be used.

Finally, we recommend the following:

- A color cover to entice potential buyers.
- 5-1/2 x 8-1/2 format for easy use in a variety of settings.
- Liberal use of photographs, illustrations, maps and white space.

Network Components Descriptions: Fixed Strategies

Strategy: Denali Highway orientation panel

Function:

The function of this panel is to orient travelers to the entire Denali Highway.

Location:

This panel is located in both portal kiosks.

Objectives:

After interacting with this opportunity, visitors will:

- be able to find any opportunity or service located along the highway;
- be aware that many different users value the Denali for different legitimate uses;
- feel like spending some time on the Denali Highway;
- be aware of all the interpretive and recreational opportunities along the route;
- have the Denali Highway map/brochure;
- have any activity brochures relevant to their trip;
- be aware that the key interpretive opportunities are fully accessible;
- be aware that the Denali Highway is a special place, worth protecting;
- be aware that the environment is fragile, requiring good stewardship practices.

Description and Concept:

One possible design concept for the orientation display is a map of the highway with pull-out photographs highlighting the visitor opportunities and activities along the way. Lines connecting the photographs to locations along the highway will reinforce the idea that the visitor can visit these areas and engage in the activities depicted. Short text blocks/photo captions will provide detail on the opportunity or activity. A brochure dispenser, with the orientation map/brochure, is located on or next to this display. One possible design concept is depicted in Figure 8.

Note: All orientation information, including directional signs, must contain information—usually in the form of symbols—as to the opportunities and services available to those with disabilities.

Comment:

A visitor to an unfamiliar environment is initially concerned with orientation information. A good orientation network will make visitors more comfortable, and make them aware of recreational opportunities in the area, thus potentially increasing use. Many travelers who need orientation will not stop at publication outlets prior to their visit. Therefore, a highly visible orientation sign will be effective in providing basic information 24 hours per day.

Strategy: Thematic Overview Panels

Function:

The function of thematic overview panels is to give an overview of the key stories told in the interpretive opportunities along the route, and, in the process of giving the overview, to communicate all the basic themes.

Locations:

These panels are located at both portal kiosks.

Objectives:

After interacting with this opportunity, visitors will:

- know that the area through which the highway passes is a product of many forces at work, especially plate tectonics and glaciation, over a long period of time.
- know that the corridor along the Denali Highway is rich in glacial landforms;
- know that the area is rich in prehistoric cultural history;
- know that people still use this area the same way as prehistoric inhabitants, to hunt and gather food;
- know that this is a biologically fragile area containing a wide variety of plants and animals;
- know that mining played a part in the history of the Denali;
- know all the major themes for the interpretive network.

Description and Concept:

These are highly visual panels focusing on an overview of the key topics and stories told along the Denali Highway. One possible design concept is as follows:

Panel 1: The Forces at Work

This panel provides an overview of the major forces that have shaped and continue to shape the physical environment, including the creation of the Alaska Range through collision of tectonic plates, the shaping of the land by ice sheets and glaciation, the effects of climate (permafrost), continued shaping through erosion by wind and water, and modifications resulting from plants. One possible design concept is to use a bird's-eye perspective of an imaginary (or real) section of the Denali Highway as a background from which lines connect pull-out illustrations depicting the force at work and the results of that force. Each pull-out has a supporting text block.

Panel 2: The Inhabitants

This panel provides an overview of the flora and fauna that live along the Denali Highway, with emphasis on the fragility of the ecosystems that can survive in this area. One possible design concept is to use background illustrations of the major biomes as a backdrop for highlighting flora and fauna commonly found in such

ecosystems. Supporting text would emphasize the connectivity of components in the ecosystem, the simplicity of the food webs, and the kind of environmental conditions under which the organisms have to survive.

Panel 3: The Visitors

This panel focuses on humans as visitors throughout the ages. One possible design concept is to use a continuum of human history to focus on the cultural story associated with the area. The backdrop would be a typical landscape.

Superimposed on that backdrop would be a progression of the groups of people, beginning with Native Alaskans, who came to this part of Alaska, all engaging in typical activities related to use of resources in that environment. A time line across the top would be used to clarify that the groups of people represented different periods of time. In each successive visual depicting a new group of people, the people already living there should be included in the background. For example, the exhibit element focusing on the gold rush era should highlight that group, but include Native Alaskans practicing traditional lifestyles. Each group would have an associated text block providing some detail on what brought them to the area.

Strategy: Parks or Richardson Highway Orientation Panel

Function:

The function of this panel is to orient travelers on the main highways to highlights and services north and south along the route.

Location:

The orientation panel for the Parks Highway is located in the west end portal kiosk, and the panel for the Richardson Highway is located in the east end portal kiosk.

Objectives:

After interacting with this opportunity, visitors will:

- be aware of available services north and south along the highway;
- be aware of recreational opportunities north and south along the highway;
- be aware of hazards driving Alaska highways, such as frost heaves, moose crossing the road, weather problems, breakdowns far from services, etc.

Description and Concept:

The concept is essentially the same as the Denali Highway orientation panel, but focusing on the Richardson Highway or the Parks Highway depending on the location of the panel.

Strategy: Safety Information Panel "Are You Prepared for THIS!"

Function:

The function of this panel is to make visitors aware of potential hazards along the way, and the scarcity of services in the hopes that they will either prepare appropriately for a trip on the Denali, or choose not to go.

Locations:

This panel should be located in both portal kiosks, and could also be located at Brushkana Wayside, Clearwater Wayside, Tangle Lakes Wayside and Delta Wayside.

Objectives:

After interacting with this display, visitors will:

- be aware of hazards associated with backcountry recreation in interior Alaska, including bears, water crossings, weather, parasites, and insects, and be aware of how to plan for, avoid and cope with such hazards;
- be able to make an informed decision on whether to continue with a planned backcountry trip;
- be aware of the hazards associated with driving the road, including flat tires, mud, weather, and lack of services, and be aware of how to plan for, avoid and cope with such hazards;
- be able to make an informed decision on whether to travel the road;
- be aware of the remoteness of the area and how isolated from help they would be if trouble occurs.

Description and Concept:

One possible design concept is to use an oblique photograph or bird's-eye perspective of an imaginary section of the highway corridor as a base for photographs highlighting drivers and backcountry recreationists encountering various hazards. Associated text identifies the problem, how it could be avoided, and equipment necessary to cope with such a hazard. Lines connecting the photographs to locations on the site will reinforce the idea that these hazards do exist in this kind of area. A brochure dispenser, with available literature pertaining to such hazards such as the brochure on bears, is located on or next to this display. One possible design is depicted in figure 9.

Executive Summary

The purpose of this paper is to provide a summary of the key findings of the study. The study was conducted in order to determine the impact of the proposed changes on the environment. The findings of the study are as follows:

- 1. The proposed changes will have a significant impact on the environment.
- 2. The impact will be both direct and indirect.
- 3. The impact will be both positive and negative.
- 4. The impact will be both short-term and long-term.
- 5. The impact will be both local and global.
- 6. The impact will be both physical and social.
- 7. The impact will be both economic and cultural.
- 8. The impact will be both health and safety.
- 9. The impact will be both education and training.
- 10. The impact will be both employment and income.

The study also found that the proposed changes will have a significant impact on the environment. The impact will be both direct and indirect. The impact will be both positive and negative. The impact will be both short-term and long-term. The impact will be both local and global. The impact will be both physical and social. The impact will be both economic and cultural. The impact will be both health and safety. The impact will be both education and training. The impact will be both employment and income.

Introduction and Context

The purpose of this paper is to provide a summary of the key findings of the study. The study was conducted in order to determine the impact of the proposed changes on the environment. The findings of the study are as follows:

- 1. The proposed changes will have a significant impact on the environment.
- 2. The impact will be both direct and indirect.
- 3. The impact will be both positive and negative.
- 4. The impact will be both short-term and long-term.
- 5. The impact will be both local and global.
- 6. The impact will be both physical and social.
- 7. The impact will be both economic and cultural.
- 8. The impact will be both health and safety.
- 9. The impact will be both education and training.
- 10. The impact will be both employment and income.

Conclusion and Recommendations

The study found that the proposed changes will have a significant impact on the environment. The impact will be both direct and indirect. The impact will be both positive and negative. The impact will be both short-term and long-term. The impact will be both local and global. The impact will be both physical and social. The impact will be both economic and cultural. The impact will be both health and safety. The impact will be both education and training. The impact will be both employment and income.

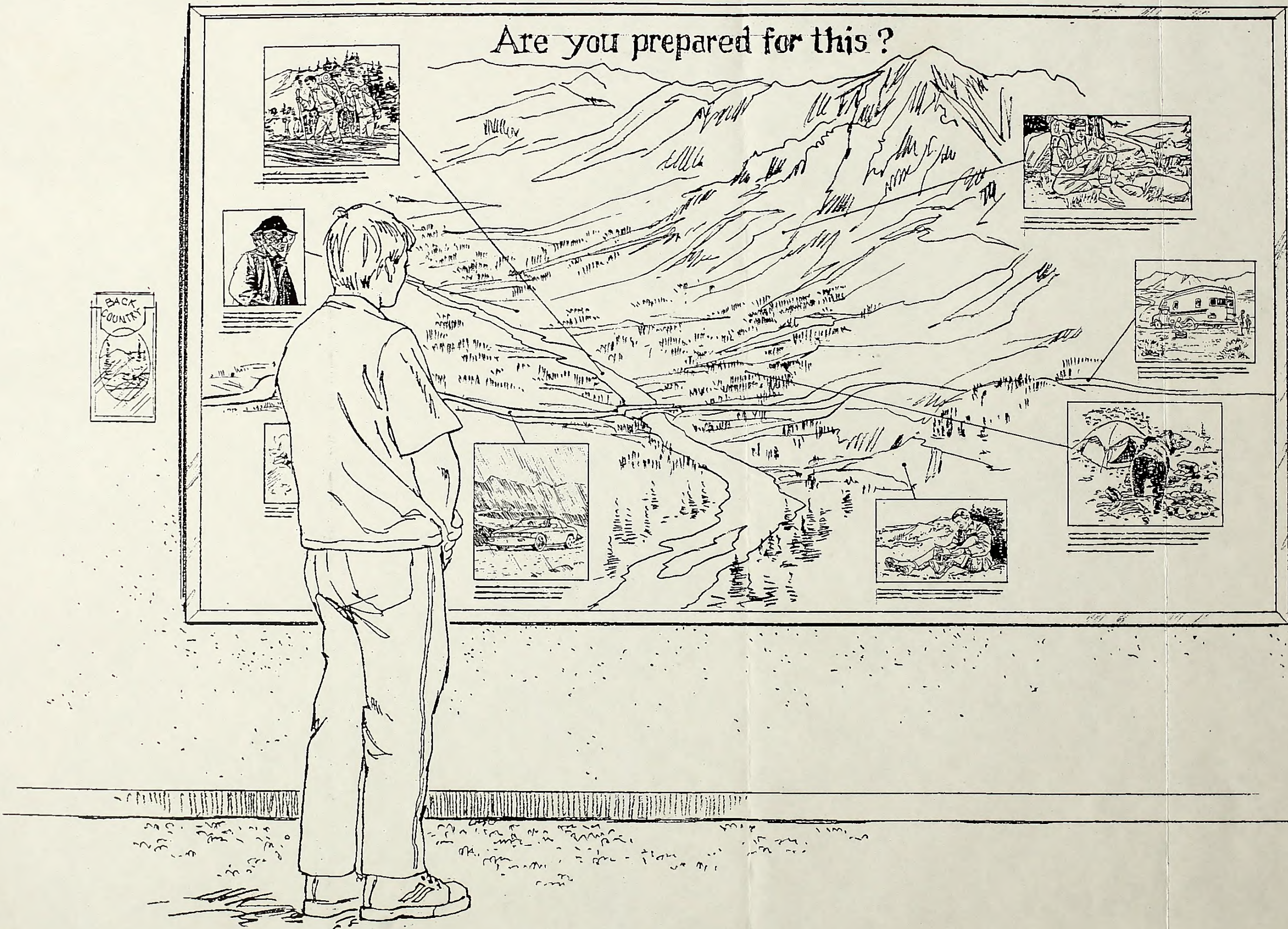


Fig. 9 Safety Information Panel Sketch

Strategy: River Orientation Panels

Function:

This strategy should function to provide basic orientation to the river accessed at that point.

Ideal Locations:

This panel, already called for in existing planning, should be developed for the access points to the Delta River and for the Gulkana River.

Objectives:

After interacting with this display, visitors will:

- be aware of rules and regulations on specific stretches of water;
- be aware of hazards along the route;
- be aware of put-in and take-out locations;
- be aware of key features and recreational opportunities along the way;
- be aware of available services, or lack thereof;
- know that the environment is susceptible to disturbance by human use and therefore, requires that users use good stewardship practices;
- be aware that many different users value the rivers for different legitimate uses.

Description and Concept:

The river orientation panel is based on the same concept as the highway orientation panel, but it focuses on the river, highlighting hazards, take-out points, and features along the way. An associated brochure dispenser would contain the Delta National Wild Scenic and Recreational River brochure and/or the Gulkana National Wild River brochure.

Strategy: Area Orientation Panels

Function:

This strategy should function to provide basic orientation to areas surrounding existing points of visitor concentration.

Ideal Locations:

This panel should be developed for the Tangle Lakes Wayside, the Clearwater Creek pulloff where the bathroom is located, and the recommended wayside at Brushkana Campground.

Objectives:

After interacting with this opportunity, visitors will:

- be able to find any opportunity or service located in the area covered by the panel;
- be aware that many different users value the Denali for different legitimate uses;
- feel like spending some time in the specific area;
- be aware of all the interpretive and recreational opportunities in the area;

- be aware that the key interpretive opportunities are fully accessible;
- know that the environment is susceptible to disturbance by human use and therefore, requires that users use good stewardship practices;
- be aware that state laws and regulations protect cultural resources and the entire cultural resource area (Tangle Lakes Archeological District).

Description and Concept:

The area orientation panel is based on the same concept as the highway orientation panel, but it focuses on the area surrounding the location of the panel, highlighting recreational and interpretive opportunities, hazards, and features in the area.

Strategy: Summit Lake Overlook Interpretive Panel Cluster

Function:

The interpretive panel cluster should function to give visitors some detail on the major forces that created the physical landscape—mountain building, ice sheets and glaciation—as a basis for understanding the other components of the landscape.

Location:

Big pullout at MP 7.5

Objectives:

After interacting with this display, visitors will:

- know that plate tectonics and glaciation were the two dominant forces that produced the large scale features viewed from this location;
- know that many of the smaller features, such as Summit Lake, and various moraines, are also the result of glaciation;
- be impressed by the mountain range and the surrounding landscape, and by the forces that created the landscape.

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. The focus for these panels is on large scale geomorphologic processes, such as glaciation, mountain building in general, and the formation and evolution of the Alaska Range specifically. The following is a possible set of panels for this pull-out:

Panel 1: The Birth of a Giant

This panel focuses on the creation of the Alaska Range through collision of tectonic plates. One possible design concept is to use a panoramic of the peaks across the start of the panel as a starting point for focusing on mountain building. Below the panoramic would be an illustration depicting the actual event with a time line at the bottom depicting when the event occurred in relation to other

events that shaped this landscape. The peaks should be named in the panoramic.

Panel 2: Ice Sculpting on a Grand Scale

This panel focuses on the effect of ice sheets and glaciation on the physical landscape over time. One possible design concept is to use the view in front of the panel as a backdrop for highlighting different features and superimposing the glacier or ice sheet that created the feature. In other words, do a panoramic of the foreground. An associated text block would provide an explanation. A time line at the bottom depicts when the event occurred in relation to other events that shaped this landscape. The features should be named in the panoramic.

Panel 3: East-West Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest. One possible design concept is to use a bird's-eye perspective of the section of highway to be highlighted as a backdrop for pull-out visuals of the key features to the east and west. Associated text blocks will interpret the feature. A line down the middle will signify where the sign is located. On the top of each side will be a title such as "Highlights to the East" and "Highlights to the West." Across the top of the panel would be a map of the entire highway with marks identifying the section highlighted.

***Note:** This is not an orientation panel. It is an interpretive panel intended to make travelers aware of key features along the next section of road to be traveled.*

Figure 10 contains one possible concept of how the interpretive panel clusters would look. Figure 11 depicts one possible design for the "East-West Highlights" panel that is found at every interpretive panel cluster.

Figure 1: The first stage of the process is to identify the key stakeholders and their interests. This is done by conducting interviews and focus groups with the relevant parties. The second stage is to map the stakeholders and their interests against the project objectives. This is done by creating a stakeholder map. The third stage is to develop a communication plan. This is done by identifying the key messages and the most effective communication channels. The fourth stage is to implement the communication plan. This is done by using a variety of communication methods, including face-to-face meetings, written reports, and electronic communication. The fifth stage is to monitor and evaluate the communication process. This is done by tracking the progress of the communication and assessing its effectiveness. The sixth stage is to report on the communication process. This is done by preparing a communication report for the project sponsor. The seventh stage is to review the communication process. This is done by reflecting on the experience and identifying areas for improvement. The eighth stage is to update the communication plan. This is done by incorporating the lessons learned into the plan for future projects. The ninth stage is to disseminate the communication plan. This is done by sharing the plan with other project teams. The tenth stage is to archive the communication plan. This is done by storing the plan in a central location for future reference.

Figure 2: The second stage of the process is to map the stakeholders and their interests against the project objectives. This is done by creating a stakeholder map. The stakeholder map is a diagram that shows the relationships between the project and its stakeholders. It identifies the key stakeholders and their interests, and maps them against the project objectives. The stakeholder map is used to identify the key stakeholders and their interests, and to develop a communication plan. The stakeholder map is also used to monitor and evaluate the communication process. The stakeholder map is a key tool for project management. It helps project managers to understand the project environment and to develop effective communication strategies. The stakeholder map is also used to identify the key stakeholders and their interests, and to develop a communication plan. The stakeholder map is a key tool for project management. It helps project managers to understand the project environment and to develop effective communication strategies.

Figure 3: The third stage of the process is to develop a communication plan. This is done by identifying the key messages and the most effective communication channels. The communication plan is a document that outlines the key messages and the most effective communication channels. It is used to guide the communication process. The communication plan is also used to monitor and evaluate the communication process. The communication plan is a key tool for project management. It helps project managers to understand the project environment and to develop effective communication strategies. The communication plan is also used to identify the key stakeholders and their interests, and to develop a communication plan. The communication plan is a key tool for project management. It helps project managers to understand the project environment and to develop effective communication strategies.

Figure 4: The fourth stage of the process is to implement the communication plan. This is done by using a variety of communication methods, including face-to-face meetings, written reports, and electronic communication. The communication plan is a document that outlines the key messages and the most effective communication channels. It is used to guide the communication process. The communication plan is also used to monitor and evaluate the communication process. The communication plan is a key tool for project management. It helps project managers to understand the project environment and to develop effective communication strategies. The communication plan is also used to identify the key stakeholders and their interests, and to develop a communication plan. The communication plan is a key tool for project management. It helps project managers to understand the project environment and to develop effective communication strategies.

Figure 5: The fifth stage of the process is to monitor and evaluate the communication process. This is done by tracking the progress of the communication and assessing its effectiveness. The communication plan is a document that outlines the key messages and the most effective communication channels. It is used to guide the communication process. The communication plan is also used to monitor and evaluate the communication process. The communication plan is a key tool for project management. It helps project managers to understand the project environment and to develop effective communication strategies. The communication plan is also used to identify the key stakeholders and their interests, and to develop a communication plan. The communication plan is a key tool for project management. It helps project managers to understand the project environment and to develop effective communication strategies.

Figure 6: The sixth stage of the process is to report on the communication process. This is done by preparing a communication report for the project sponsor. The communication report is a document that summarizes the communication process and its results. It is used to report on the communication process to the project sponsor. The communication report is a key tool for project management. It helps project managers to understand the project environment and to develop effective communication strategies. The communication report is also used to identify the key stakeholders and their interests, and to develop a communication plan. The communication report is a key tool for project management. It helps project managers to understand the project environment and to develop effective communication strategies.

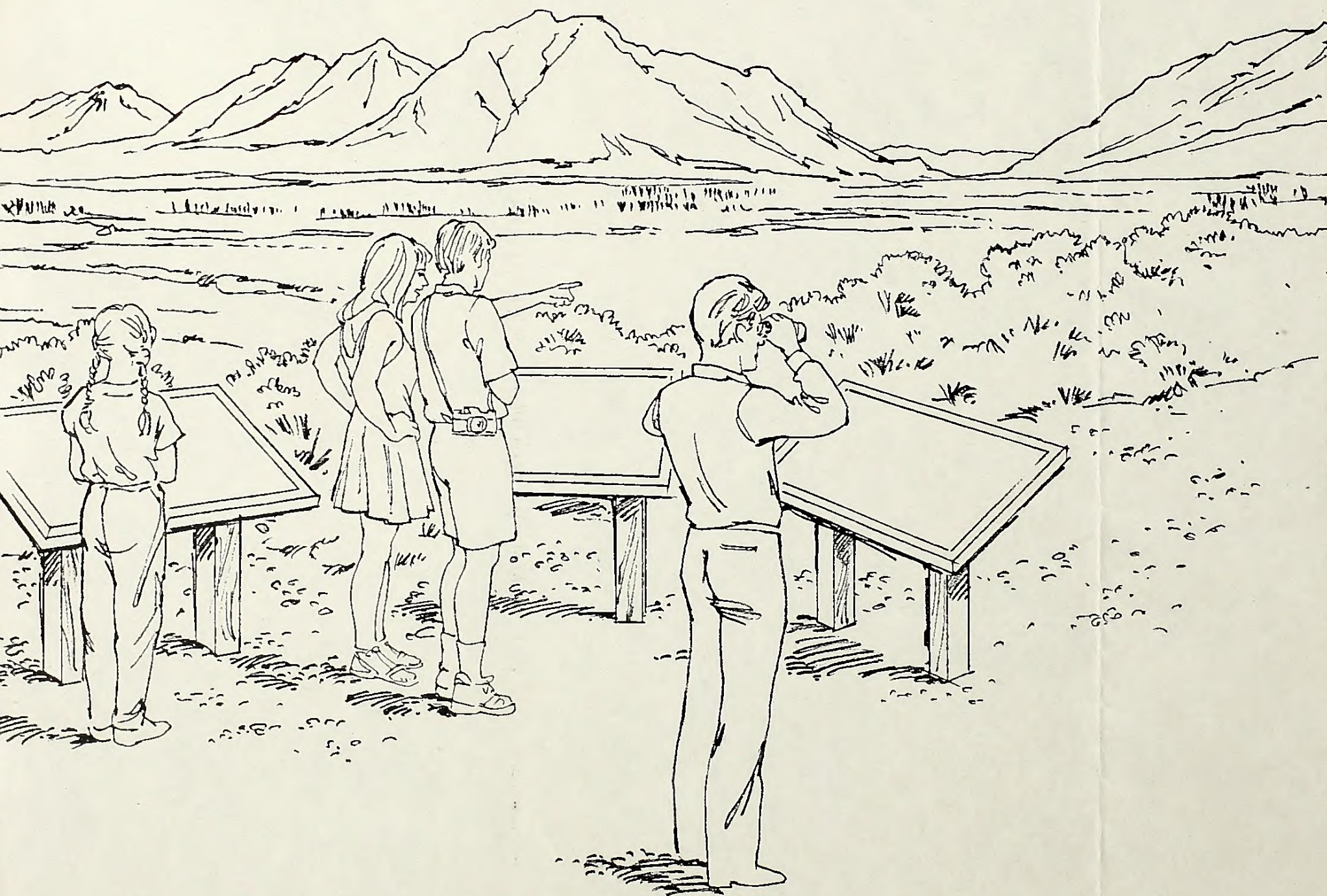
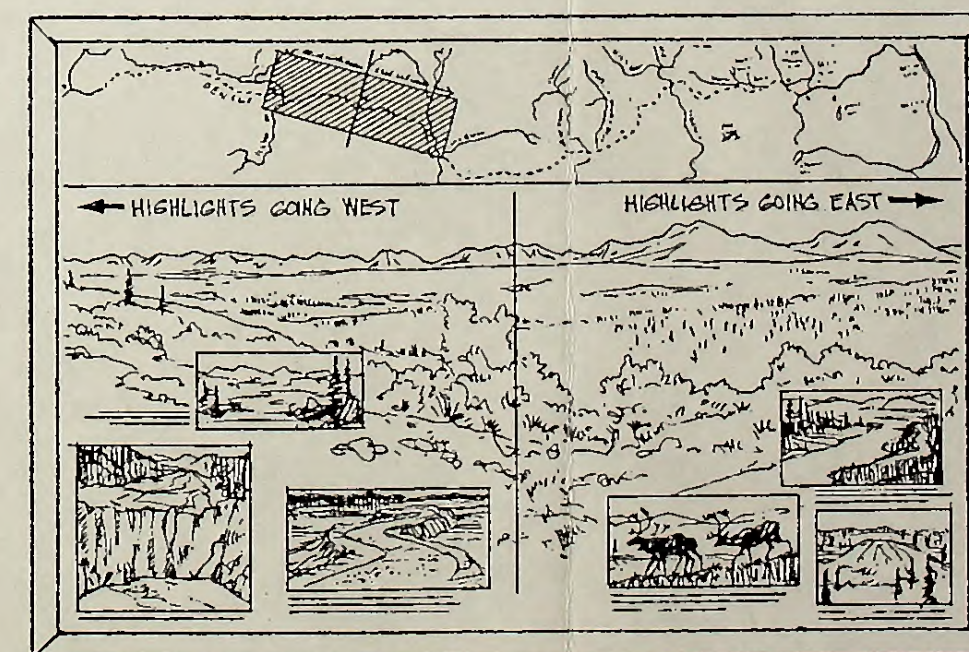
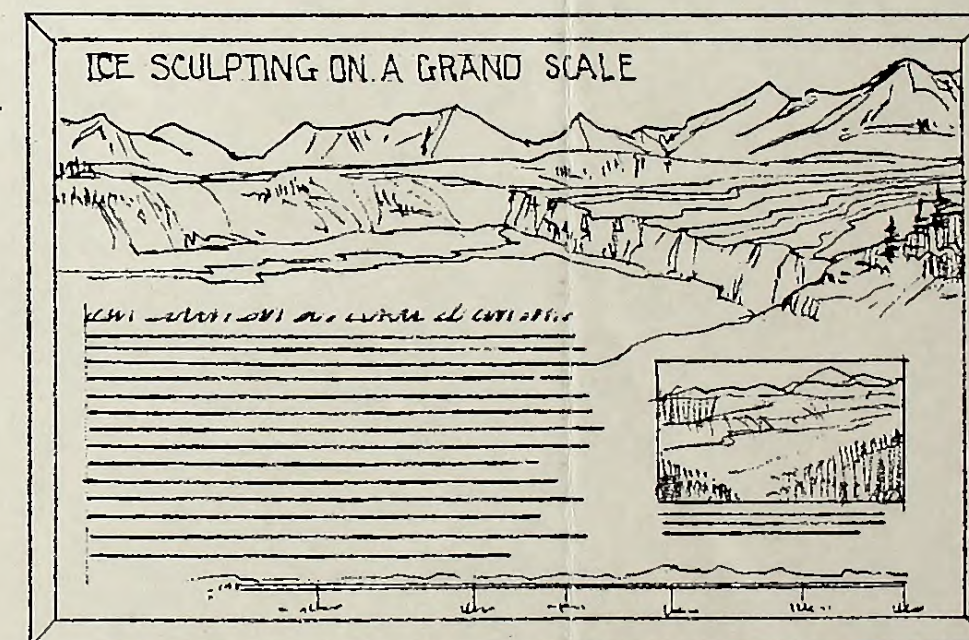
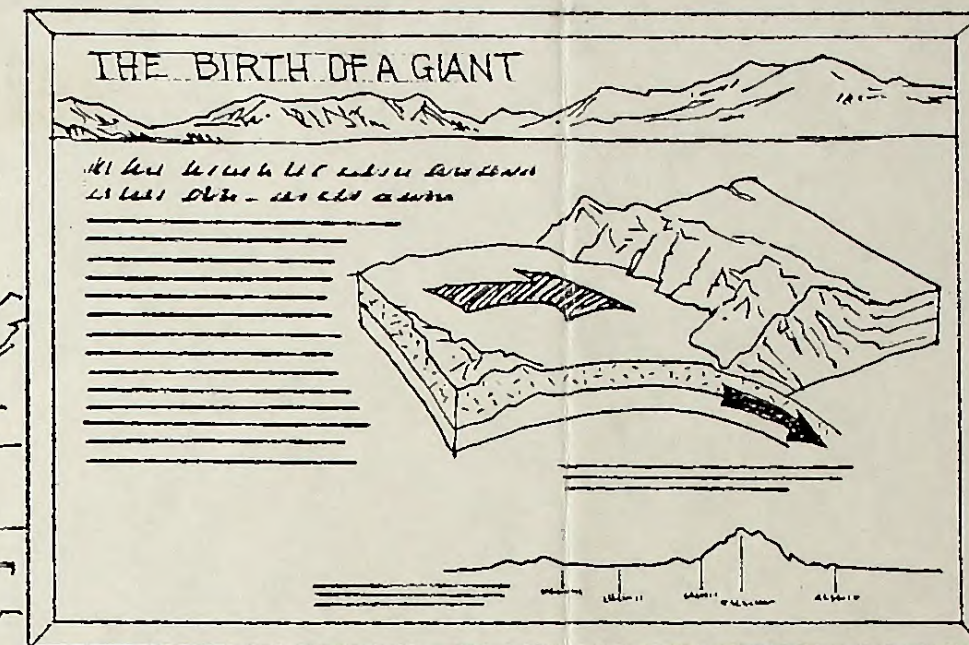


Fig. 10 Summit Lake Overlook
Interpretive Panel Cluster Sketch

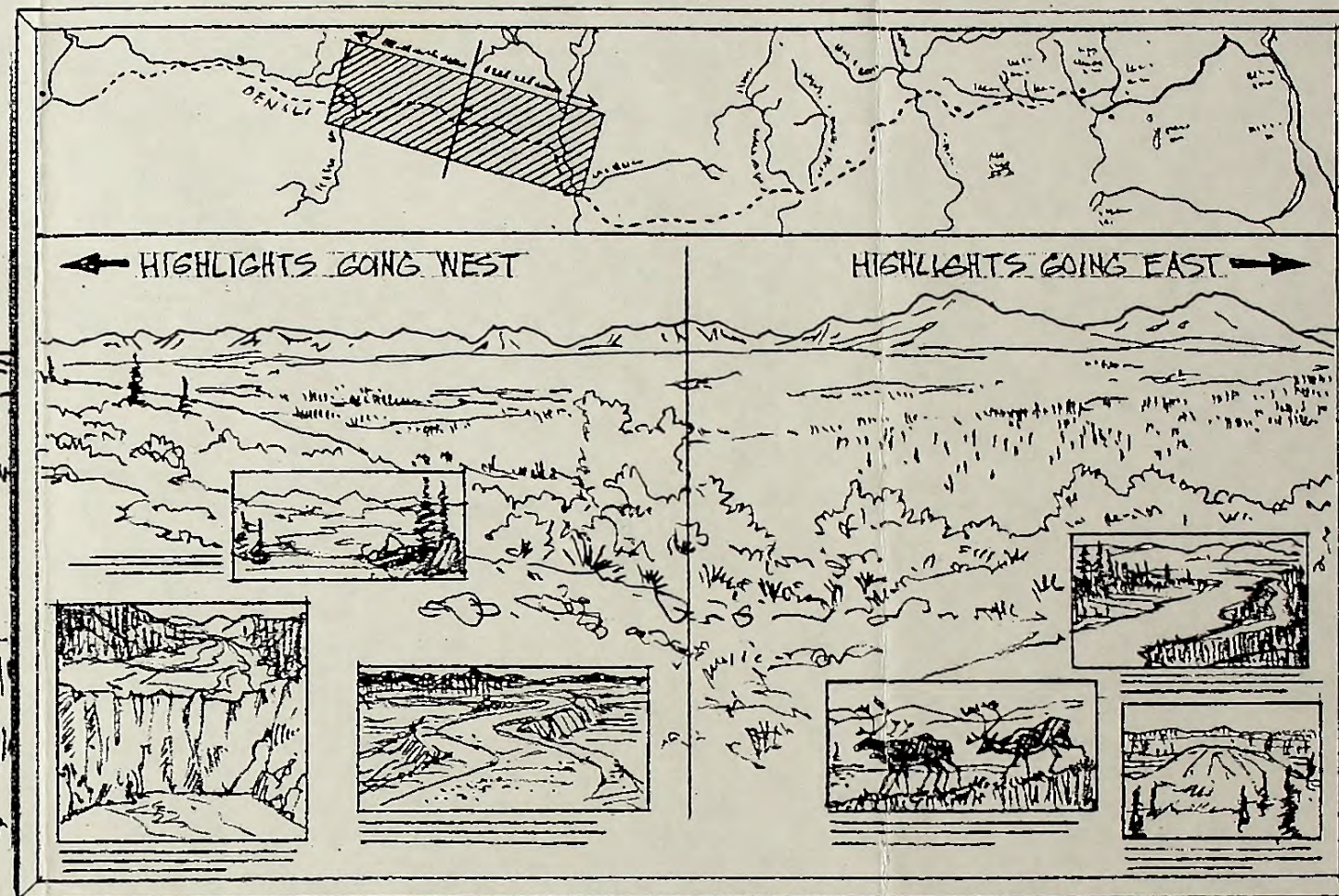
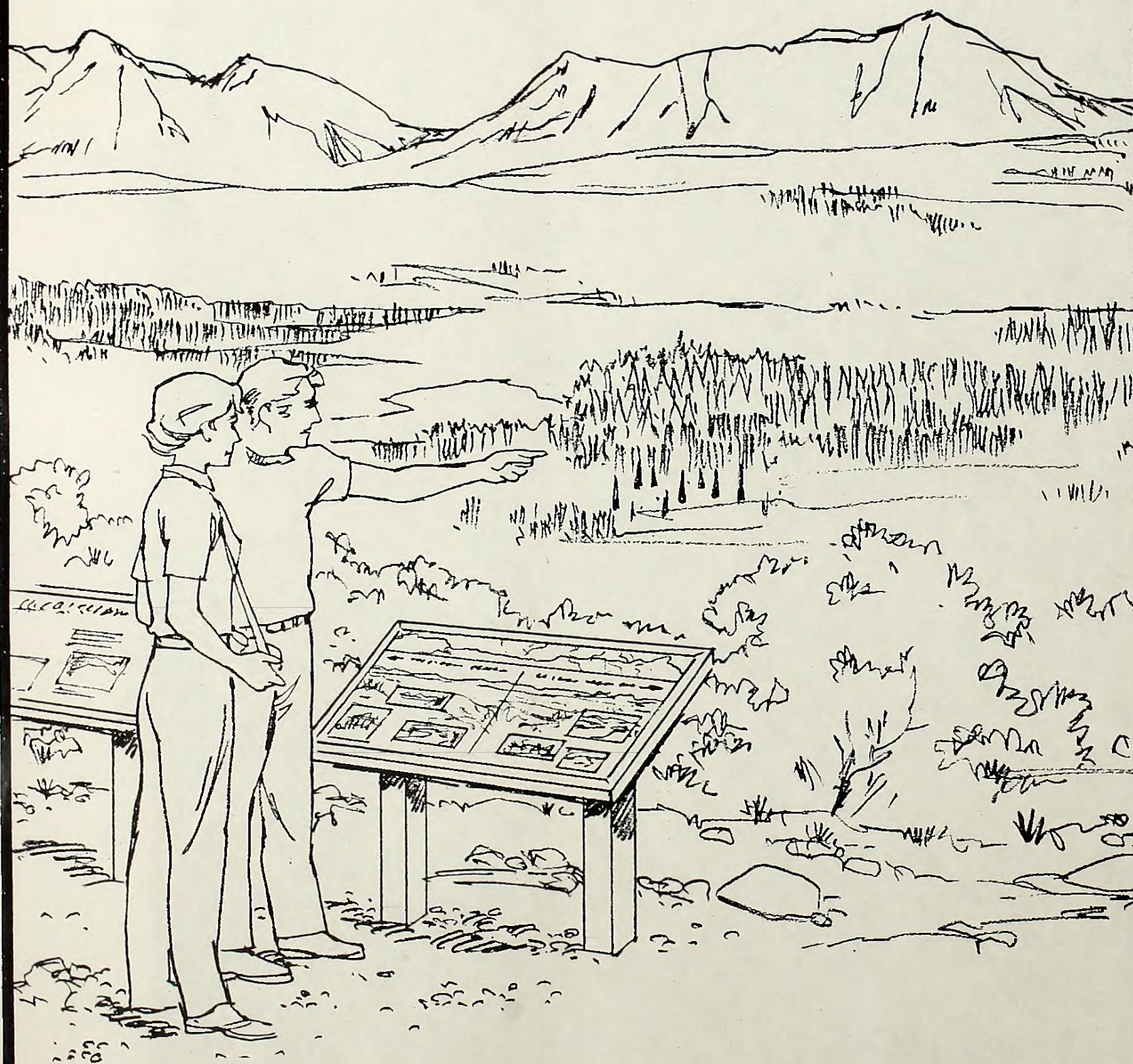


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**Fig. 11 Typical East-West Highlights
Panel Sketch**

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Strategy: Tangle Lakes Overlook Interpretive Panel Cluster

Function:

This set of panels focuses on the cultural activity at the Tangle Lakes area over the entire history of human presence.

Location:

MP 20.2 (Existing pullout on north side of road just west of Tangle Lakes Lodge.)

Objectives:

After interacting with this display, visitors will:

- know that the first people valued this area for food resources;
- know that people continue to value this area for food resources;
- know that wildlife is concentrated in this area because of the freshwater, location on migration routes, and resources in terms of vegetation;
- know that this area contains one of the greatest concentrations of archaeological sites in interior Alaska;
- know that the cultural resources are valuable and fragile, therefore, the area is managed in such a way as to allow recreational activities without damaging the cultural or natural resources;
- know that the area is valued by different people for different legitimate purposes.

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. Since this is an Archaeological District, the focus should be on the prehistoric people who used this place. With that in mind, we suggest panels focusing on prehistoric use of the area, natural history with a focus on how this area was created, *why* the wildlife was here and the connection of wildlife to prehistoric use of the area, and on the progression of human use of the area from prehistoric times until present. The following is one possible set of panels for this location.

Panel 1: You are Underwater!

This panel focuses on how the area looked when a lake covered much of the lowlands, and the human use of the area at that time. One possible design concept is to create the view of the landscape as it would have looked from the same point as visitors are standing. It should contain recognizable features in the background. This would be a backdrop for prehistoric humans engaged in whatever activities took place in this location. Given the extent of the background, these highlighted activities may have to be depicted in the scene, but magnified in an associated visual so visitors can see what was happening. Possible activities include tool and weapon making, skinning a caribou or other megafauna, fishing, hunting waterfowl, etc.

Panel 2: A Supermarket for the Ages

This panel focuses on the use of this area over time, with emphasis on the fact that though the landscape changed, the area continued to attract wildlife and therefore, attracted those for whom the wildlife was a source of food. One possible design concept is to show a continuum of landscape evolution, including changes in the flora and fauna inhabiting the area. Humans would also be a part of the continuum, engaging in hunting and gathering with the clothing and tools appropriate for the time period. A time line across the top would correspond to the time period being depicted in the illustration. The continuum would include the present, depicting people still engaged in hunting and angling for subsistence as well as recreation. The continuum would end with a question mark associated with the future. A text block would focus on the fragility of the natural environment and the need to manage if the supply of food resources is to be maintained.

Panel 3: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest.

Note: This panel could also be located at the Tangle Lakes Wayside.

Strategy: Landmark Gap Overlook Interpretive Panel Cluster

Function:

This set of panels will function to make visitors aware of the relationship of prehistoric people and present day Native Alaskans with megafauna in general, and caribou specifically.

Location:

A plan exists to create a pullout at MP 22.4 and locate the panels at the edge of the pullout. If possible, these panels should be atop the esker immediately adjacent to the pullout. A short trail would have to be constructed to reach the point. The advantage from an interpretive perspective is to pull visitors away from their vehicles and put them in a place that could have been used by prehistoric hunters as a point for making spear points while watching for migrating animals.

Objectives:

After interacting with this display, visitors will:

- know that glaciation created Landmark Gap;
- know that the physical landscape created by the forces of plate tectonics and glaciation controls migration patterns, and therefore, human use patterns;
- know that Landmark Gap was and is a major migration corridor;
- know that prehistoric humans valued megafauna, including caribou, very highly for a

- variety of reasons including food, furs, materials for making tools and weapons, etc.
- know that some people today still value caribou highly for many of the same reasons they were valued by prehistoric humans;
- know that they hunted using similar techniques as today, but in groups as a necessity due to primitive weapons.
- feel impressed by the courage, skill and intelligence of the prehistoric peoples.

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. The existing plan calls for a pullout with an interpretive panel entitled "Paths Across Time" to be relocated here from another location. Due to the prominence of the geologic feature so visible from this point, we suggest another set of interpretive panels with a focus on how that particular feature was formed, and how it affected wildlife migration patterns and therefore, prehistoric use of the area. It might be appropriate to highlight caribou because of the migration route, and highlight the relationship Native Alaskans have had with caribou and other megafauna throughout the ages. These panels should be designed to complement, not repeat, the panels at Tangle Lakes Overlook. One possible set of panels is as follows:

Panel 1: Untitled

This panel highlights the hunting techniques, weapons and prey of prehistoric peoples in this area. One possible design concept is to use the scene as a backdrop for showing what the area would have looked like from a prehistoric hunter's perspective. Consequently, the foreground should show cave bears, caribou and other such megafauna that inhabited the area at the time. The scene should also show a group of hunters approaching prey. In the immediate foreground should be a group of hunters on the esker chipping chert and engaging in other tasks related to making weapons. Supporting text would identify and explain the basic activities. An inset would illustrate how landmark gap formed, and another would show migration patterns, emphasizing the impact of the physical landscape on dictating travel routes.

Panel 2: The Walking Gold Mine

This panel focuses on the relationship Native Alaskans, including prehistoric humans, have had with megafauna in general and with caribou specifically. One possible design concept is to show a typical prehistoric dwelling or hunting camp with people in it, and highlight all the tools and objects that come from megafauna including tools, food, furs, cordage, weapon parts, etc. Supporting text would focus on all the uses of different parts of the animals. On the same panel, highlight the home of a present day Native Alaskan practicing traditional lifestyle and do the same. Supporting text would focus on the importance of this animal in the traditional lifestyle.

Panel 3: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest.

Strategy: Maclaren Summit Overlook Interpretive Panel Cluster

Location:

MP 37.0

Objectives:

After interacting with this display, visitors will:

- know that climate plays a big role, in the form of permafrost, in shaping the physical landscape;
- know that the Alaska Range is a key factor in the climate of the area;
- know that the environmental conditions are harsh, requiring unique and hardy flora and fauna especially adapted to the conditions;
- know that the environment is susceptible to disturbance by human use and therefore, requires that users use good stewardship practices;

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. The existing plan calls for a wayside with interpretive panels focusing on mountain building and glaciation, climate and permafrost including features created by those two forces, the landscape, and the tundra. To narrow the focus and avoid overlap, we recommend focusing on natural forces that have shaped and continue to shape the landscape. One possible set of panels is as follows:

Panel 1: Untitled

This panel uses a panoramic of the scene to the north, with labels identifying the major peaks and features in the Alaska Range as a focal point for beginning a discussion of forces that shape the land. A short text block with inset illustration can repeat the mountain building process if deemed necessary. The features labeled should include the glaciers and river. Another inset illustration should depict what the area looked like during the ice age so people understand the impact of glaciation on creating the landscape. The lumpy landscape on the valley floor, along with the kettle ponds and moraines viewed from this point should all be identified as features created by glacial action. The river should also be highlighted as a force continuing to modify the landscape.

Panel 2: Untitled

This panel focuses on climate in general, and permafrost specifically as a force that continues to modify the environment. One possible design concept is to explain permafrost using an illustration or set of illustrations. An inset map of

Alaska depicting the presence of permafrost should be included. Additional combinations of photographs and illustrations should focus on the impact of permafrost in creating the landscape the visitor passes through. The formation of palsas and pingos should be included in this section.

Panel 3: Untitled

This panel focuses on tundra with emphasis on the harsh environmental conditions and consequent adaptations of the flora and fauna that make up this biome. One possible design concept is to use a visual of tundra as a background for pull-out visuals of key inhabitants of this ecosystem. Associated text blocks would not only highlight adaptations or behavioral patterns as a response to the environmental conditions, but also the relationships between flora and fauna of the tundra. An inset illustration would show the range of tundra in Alaska. The sky would feature various kinds of climatic conditions that are common in the area, such as snow, darkness, and low intensity sun. Again, associated text blocks would explain the condition and what it means to flora and fauna that live in or pass through the area.

Panel 4: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest. The kettle ponds and palsa to the west should be included.

Strategy: Tundra Interpretive Trail

Function:

This trail is intended to focus attention on the flora and fauna found in tundra.

Location:

MP 37.0 (Maclaren Summit Overlook)

Objectives:

After interacting with this display, visitors will:

- know that climate plays a big role, in the form of permafrost, in shaping the physical landscape;
- know that the Alaska Range is a key factor in the climate of the area;
- know that the environmental conditions are harsh, requiring hardy flora and fauna especially adapted to the conditions;
- know that the environment is susceptible to disturbance by human use and therefore, requires that users use good stewardship practices.

Description and Concept:

This should be a short loop trail highlighting different species of flora and fauna found in the tundra. The trail should be on a boardwalk with rails to help protect the fragile environment. Information, in the form of a brochure, should focus on the adaptations to the environment, the environmental conditions requiring those adaptations, and the connections between flora and fauna.

Strategy: Waterfowl Lakes Overlook Interpretive Panel Cluster

Location:

MP 49.5 (or nearby pullout with similar view)

Objectives:

After interacting with this display, visitors will:

- know that water is a key resource for fauna in the area;
- the area is important nesting habitat for some species of migratory waterfowl;
- know that beaver are a major shaper of the environment because they create wetlands, and therefore, have impact on other species of flora and fauna;
- know that the environment is susceptible to disturbance by human use and therefore, requires that users use good stewardship practices.

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. This set of panels should focus on the relationship of water to wildlife, with emphasis on migratory waterfowl, beaver and other species that need wetland type environments. This should be located at a wayside overlooking some of the many lakes and ponds along the route. One possible set of panels is as follows:

Panel 1: Untitled

This panel focuses on migratory waterfowl, with emphasis on the importance of the area as nesting habitat for some species. One possible design concept is to use the view as a backdrop illustration and add pull-out visuals highlighting common species found in this area. Some nesting species should be shown nesting. Supporting text blocks should identify each species and why it comes here. An inset illustration should show a map of North America indicating where each migrating species shown travels to or from, and the route they take.

Panel 2: Untitled

This panel focuses on other wildlife that depend on this type of environment along the Denali. One possible design concept is to show another small lake with a small stream running into the lake. The riparian area along the banks of the stream should contain shrubs and trees commonly found along watercourses. A short way

upstream should be a beaver dam and resulting pond. Again, pull-out visuals would highlight the species that use the area including beaver, moose, songbirds in the riparian thickets and common fish species if any. Associated text blocks would focus on the importance of the habitat to the species, and on the scarcity and fragility of the ecosystems.

Panel 3: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest.

Strategy: Glacial Features Viewpoint Interpretive Panel Cluster

Location:

MP 59.5

Objectives:

After interacting with this display, visitors will:

- know that eskers are created by ice sheets or glaciers;
- eskers were common in North America but most have been mined for sand and gravel;
- eskers were a key factor in use patterns by humans and migrating mammals.

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. This set of panels focuses on the smaller features associated with glaciation, such as eskers and moraines. This cluster is located on an esker. One possible set of panels is as follows:

Panel 1: Untitled

The panel focuses on the creation of eskers. One possible design concept is to use a set of illustrations with supporting text to explain how eskers are formed. An inset illustration should depict the distribution of eskers across North America with supporting text noting that most have disappeared as a result of being mined for sand and gravel.

Panel 2: Untitled

This panel focuses on other uses of eskers, specifically, as a travel route for migratory megafauna, prehistoric humans, Native Alaskans, explorers, wagons supplying mines, and finally, for vehicles on highways built on eskers. One possible design concept is to show an esker with a progression of travelers. Supporting text blocks would identify the traveler and highlight the importance of the esker as a travel route that was out of the wetlands.

Panel 3: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest.

Strategy: Susitna River Overlook Interpretive Panel Cluster

Location:

MP 71.8

Objectives:

After interacting with this display, visitors will:

- know that, despite the appearance of usable resources, the environmental conditions and situation make this a difficult area for human settlement;
- a nomadic lifestyle was most suited to the conditions and resources of the area;
- this area, and similar areas are still valued for resources and recreational opportunities;
- know that the environment is susceptible to disturbance by human use and therefore, requires that users use good stewardship practices.

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. This set of panels focuses on why humans have not settled in this area. One possible set of panels is as follows:

Panel 1: Why No Settlements?

This panel looks at this area from the perspective of humans trying to survive in the area. Consequently, lack of a growing season, difficulty in traveling in and out due to impassable sections of the Susitna downstream, harshness of the winters and other such factors should all be included. One possible design concept is to have the question "Why no Settlements?" in large text across the top of the panel as a way of having travelers consider the environment from the standpoint of settlement. For most travelers from the lower 48, the scene of scattered forests and meadows in the valley of a major river should have major settlements in the picture. Below the title, illustrations or other visuals, with associated text blocks, should focus on the difficulty of growing food, shipping food in, and gathering enough food to survive through the year. This should be compared with places like Nome, Fairbanks and other more northerly cities that became established due to travel routes, proximity to valuable resources, and presence of some food resources.

Panel 2: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest.

Strategy: Valdez Mine Overlook Interpretive Panel Cluster

Location:

About MP 84.5, just before the road goes behind a ridge that blocks the view of the river.

Objectives:

After interacting with this display, visitors will:

- know that transportation routes were developed throughout Alaska to reach gold and other resources deemed valuable by society;
- know that the Valdez mine had impact on the development of the area in terms of transportation routes and infrastructure (roadhouses);
- know that the area is valued by people for possible presence of minerals;
- know that the Valdez mine area is State selected lands and has some private property;
- respect the private property in the area.

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. This set of panels should focus on the Valdez Mine, the impact of the mine on development of the area, and the impact of mining on Alaska in general with emphasis on the development of transportation systems and perhaps roadhouses. If the location is at a point where the bridge can also be viewed, a panel could focus on the effect of rivers on exploration and settlement of Alaska. This set of panels should be located at a point where the mine can be seen. One possible set of panels is as follows:

Panel 1: Untitled

This panel should focus on the town and the mine, using historic photos and quotes to give an idea of what life was like during the heyday of mining activity. An associated text block would briefly recount the discovery of gold and subsequent development of the mine.

Panel 2: Beating a Path to Your Door

This panel focuses on the impact of mining in the development of this area and in the rest of Alaska. Specifically, if a mine was developed, a transportation route was created to supply the miners and to ship gold out. These transportation routes, whether by river, ice-covered river, trail or road were a key to development of the system of highways, roads and trails in Alaska. Also, because of the system of travel at the time, roadhouses developed to serve the travelers. One possible design concept is to use an old map of the Denali area depicting the location of travel routes and roadhouses. Historic photos of travel to and from the mine, and of the roadhouses would be an effective addition. Supporting text would focus on travel in the far north. A smaller inset could contain an old map of interior Alaska depicting mines, major towns and major travel routes with roadhouses noted. Some pull-out historic photographs should be included showing mining settlements and roadhouses. Another inset map of present day Alaska could be

included to show how many of the travel routes became roads, and the roadhouses survived as small or larger settlements.

Panel 3: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest.

Strategy: Hungry Country Interpretive Panel Cluster

Location:

MP 93 or similar pullout on the north side of the road in the vicinity.

Objectives:

After interacting with this display, visitors will:

- know that the living conditions are tough for any biological organism, therefore, there are few species and simple food webs;
- know that the environment is susceptible to disturbance by human use and therefore, requires that users use good stewardship practices;
- know that the continental divide passes through the area.

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. This set of panels focuses on the harshness of the living conditions, resulting in stunted growth, simple food webs and few species. One possible set of panels is as follows:

Panel 1: Hungry Country

This panel compares the productivity of this area with an area somewhere in southeast Alaska. Side-by-side visuals of each would depict typical species and vegetation. Underneath would be a set of visuals emphasizing productivity. For example, one graphic should compare food webs, with supporting text focusing on living conditions and availability of nutrients as key reasons for the differences. Another graphic should compare tree rings from a tree from each area. Again, supporting text should focus on living conditions and nutrients as key factors. Finally, a graphic depicting the amount of area required to produce one bear in this area versus the other area.

Note: Two panels may be required to depict all this information.

Panel 2: Welcome to the Top of North America

This panel focuses on the continental divide and its impact on the flow of water, migration routes, climate and vegetation patterns in interior Alaska. One possible design concept is to use an inset to illustrate the function of the divide as a

separator of watersheds, then show how it divides the waters of interior Alaska. The basic part of the panel would be a view of the continental divide highlighting any differences in the view. If the view has none, note that fact, and add an illustration of the continental divide in an area where the differences are more marked.

Note: The road should have a small sign noting the location of the continental divide.

Panel 3: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest.

Strategy: Taiga/Boreal Forest Interpretive Trail

Location:

Brushkana Wayside (MP 105)

Objectives:

After interacting with this display, visitors will:

- know that this specific ecosystem is found around the world;
- know that the environment is susceptible to disturbance by human use and therefore, requires that users use good stewardship practices;
- know that this environment contains unique flora and fauna, specially adapted to the environmental conditions.

Description and Concept:

This should be a short loop trail highlighting different species of flora and fauna found in the boreal forest biome. Information, in the form of a brochure, should focus on the adaptations to the environment, the environmental conditions requiring those adaptations, and the connections between flora and fauna.

Strategy: Taiga/Boreal Forest Interpretive Panel Cluster

Location:

MP 111

Objectives:

After interacting with this display, visitors will:

- know that this specific ecosystem is found around the world;

- know that the environment is susceptible to disturbance by human use and therefore, requires that users use good stewardship practices;
- know that this environment contains unique flora and fauna, specially adapted to the environmental conditions;

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. This set of panels focuses on this specific ecosystem, with emphasis on the conditions that lead to this kind of vegetation. One possible set of panels is as follows:

Panel 1: Untitled

This panel focuses on taiga or boreal forest as an ecosystem. One possible design concept is to use a bird's-eye perspective of the landscape as seen from the viewpoint as a background for pull-out visuals of typical flora and fauna. Supporting text blocks would identify the species and summarize the key relationships of that species with other species in that environment. Associated text blocks would not only highlight adaptations or behavioral patterns as a response to the environmental conditions, but also the relationships between flora and fauna of the Taiga. The sky would feature various kinds of climatic conditions that are common in the area, such as snow, darkness, and low intensity sun. Again, associated text blocks would explain the condition and what it means to flora and fauna that live in or pass through the area. An inset illustration would show the range of Taiga in Alaska and around the world.

Note: This information should complement, not duplicate, the information available on the Boreal Forest Interpretive Trail at Brushkana Wayside.

Panel 2: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest.

Strategy: Nenana River Overlook Interpretive Panel Cluster

Location:

MP 116

Objectives:

After interacting with this display, visitors will:

- know that rivers are continuing the work of shaping the landscape;
- know that rivers and river valleys were key travel corridors for migrating fauna and for humans throughout the ages.

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. The focus of these panels is rivers and their place in human use patterns and in geomorphology. One possible set of panels is as follows:

Panel 1: Untitled

This panel focuses on the role of rivers as a shaper of the environment. One possible design concept is to use a set of illustrations depicting the river valley in view in different stages of erosion of a river valley. The current view should be included as well as at least one stage in the future. Features should be labeled. Associated text blocks should focus on the river as a transporter of sediment and shaper of the land. Typical features associated with the age of a river or characteristics of the landscape should be identified so travelers can apply the information to other rivers they encounter on their trip.

Panel 2: Why is the River that Color?

This panel focuses on glacial silt and flour carried by rivers, and its effect on the aquatic ecosystem of the river as well as the body of water into which the river goes. One possible design concept is to use a set of illustrations to show how glacial silt and flour is created, then carried into the river system, then use a cross-section of the river seen in the view to highlight the effects on flora and fauna. Finally, photos and/or illustrations should depict the accumulation of glacial flour and silt in water bodies and the effect on that environment.

Note: Panel 2 may have to be divided into 2 panels.

Panel 3: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest.

Strategy: Mountains Viewpoint Interpretive Panel Cluster

Function:

The interpretive panel cluster should function to give visitors some detail on the major forces that created the physical landscape—mountain building, ice sheets and glaciation—as a basis for understanding the other components of the landscape. Because it is at the beginning of the trip for visitors entering from the Parks Highway, it will contain essentially the same information as the panels at the Summit Lake Overlook, the first interpretive panel cluster for visitors entering from the Richardson Highway.

Location:

MP 130

Objectives:

After interacting with this display, visitors will:

- know that plate tectonics and glaciation were the two dominant forces that produced the large scale features viewed from this location.
- know that many of the smaller features, such as various moraines, are also the result of glaciation.

Description and Concept:

These should be low-angled panels, arranged in a cluster and oriented to features associated with the focus of the panel. The focus for these panels is on large scale geomorphologic processes, such as glaciation, mountain building in general, and the formation and evolution of the Alaska Range specifically. The following is a possible set of panels for this pull-out:

Panel 1: The Birth of a Giant

This panel focuses on the creation of the Alaska Range through collision of tectonic plates. One possible design concept is to use a panoramic of the peaks across the start of the panel as a starting point for focusing on mountain building. Below the panoramic would be an illustration depicting the actual event with a time line at the bottom depicting when the event occurred in relation to other events that shaped this landscape. The peaks should be named in the panoramic.

Panel 2: Ice Sculpting on a Grand Scale

This panel focuses on the effect of ice sheets and glaciation on the physical landscape over time. One possible design concept is to use the view in front of the panel as a backdrop for highlighting different features and superimposing the glacier or ice sheet that created the feature. An associated text block would provide an explanation.

Panel 3: Highlights

This panel focuses on interpreting the landscape east and west through which the visitor will drive, making visitors aware of key features and points of interest.

Objectives

After studying with this chapter, students will:

1. Know the main objectives and functions of the large-scale business system.
2. Know the main objectives and functions of the large-scale business system.

Description and Concepts

There should be two major parts, organized in a clear and logical manner. The first part should be the description of the system. The second part should be the description of the system. The following is a possible outline of the system.

Part 1: The Birth of a Child

This part should be the description of the system. The following is a possible outline of the system.

Part 2

Cost Range Information

This part should be the description of the system. The following is a possible outline of the system.

Part 3: Highlight

This part should be the description of the system. The following is a possible outline of the system.

Cost Range Information

Introduction

Estimates in this case are restricted to interpretive strategies, not supporting infrastructure such as the portal kiosk. As with construction of anything from an exhibit to a house, accuracy of the estimate is relative to the accuracy and detail of the design. Since these strategies have not been designed, accurate cost estimates are not possible. However, some idea of the magnitude of cost is important for budgeting purposes. Consequently, cost *range* information was developed based in part on industry standards and in part on experience with previous projects. In all cases, the degree of the estimate corresponds with the level of detail in the report, and the potential complexity of the final design. In other words, a cost range for a flat plate exterior panel, even in the conceptual design phase, can be developed with a good degree of confidence because of the constraints on the final design and product. However, establishing a cost range for a publication, which while still in the conceptual stage could range from a one-color brochure to a full color booklet with photographs is somewhat pointless because it can cost as much or as little as the designer wants. Therefore, we have prepared cost range estimates for the panels only.

Cost Range Estimates

The following estimates assume the panels will be screen printed and fiberglass embedded. A typical, screen printed, fiberglass-embedded panel, of approximately 9 sq.ft. (3½' x 2½') will cost between \$2500 and \$3500. Therefore, the following are the cost ranges for panels recommended for this interpretive network:

| | |
|---|---|
| Denali Highway orientation panels (2) | \$2500 - \$3500 for one. \$600 - \$800 for the second panel. The only cost for the second panel is minor alteration for the "You are Here," embedment and the frame because the design has already been done. |
| Richardson Highway orientation panel | \$2500 - \$3500 |
| Thematic overview panels (3 panels) (2 sets) | \$7500 - \$10,500 for one. \$1750 - \$2250 for the second set. |
| Safety information panel | \$2500 - \$3500 for one. \$600 - \$800 for each additional panel. |
| Bulletin board | Highly variable. Depends on design and materials. |
| Brochure holders | Highly variable. Depends on design and materials. |

| | |
|--|---|
| River Orientation Panels (2) | \$2500 - \$3500 for one. \$600 - \$800 for the additional panel. |
| Area Orientation Panels (3) | \$2500 - \$3500 for one. \$600 - \$800 for each additional panel. |
| Summit Lake Overlook: 3 panels | \$7500 - \$10,500 |
| Tangle Lakes Overlook: 3 panels | \$7500 - \$10,500 |
| Landmark Gap Viewpoint: 3 panels | \$7500 - \$10,500 |
| Maclaren Summit Wayside: 4 panels | \$10,000 - \$14,000 |
| Waterfowl Lakes Overlook: 3 panels | \$7500 - \$10,500 |
| Glacial Features Overlook: 3 panels | \$7500 - \$10,500 |
| Susitna River Overlook: 2 panels | \$5000 - \$7500 |
| Valdez Mine Overlook: 3 panels | \$7500 - \$10,500 |
| Continental Divide Overlook: 3 panels | \$7500 - \$10,500 |
| Boreal Forest Overlook: 2 panels | \$5000 - \$7500 |
| Nenana River Overlook: 3 panels | \$7500 - \$10,500 |
| Mountains Wayside: 3 panels | \$7500 - \$10,500 |

Priority for Implementation

Priority for Implementation

Priority for Implementation

Introduction

Priority classifications are based on the goals, parameters, audience, and site inventory associated with this project. In general, those actions classified as high priority are those that will enable to make the most progress toward the interpretive goals for the least expenditure of resources.

In using this list, please bear in mind that priority is based on creating an effective interpretive network, and is also based on what we know at this time. Circumstances will change, especially as different actions are taken. Consequently, the priority of every action should be reassessed periodically. Also, a low priority does not mean the strategy or action is unimportant or that it should not be implemented sooner if resources become available.

Level 1 Priority

Portal kiosks with the following components:

- Denali Highway orientation panel
- Safety information panel
- Brochure holder for orientation brochure

River orientation panels with brochure holders

Orientation is the highest priority as is traveler safety. The current orientation system, consisting primarily of the orientation brochure, is good, but not sufficient due to the difficulty in distributing brochures, and the fact that some travelers don't read the brochure. Consequently, these strategies are the highest priority.

Level 2 Priority

Thematic overview panels

Activity brochures

Level 3 Priority

Summit Lake Overlook Interpretive Panel Cluster

Tangle Lakes Overlook Interpretive Panel Cluster

Landmark Gap Viewpoint Interpretive Panel Cluster

Maclaren Summit Overlook Interpretive Panel Cluster

Valdez Mine Overlook Interpretive Panel Cluster

Mountains Viewpoint Interpretive Panel Cluster

These sites were deemed slightly higher priority than the other interpretive panel clusters because they provided overview (Summit Lake and Mountains), were more likely to be visited due to proximity to the access points or were located in areas where protecting of cultural or natural resources, or private property was a key.

Level 4 Priority

The remaining 6 interpretive panel clusters

Level 5 Priority

Boreal Forest Interpretive Trail

Tundra Interpretive Trail

Points of Interest Guide to the Denali Highway

Level 6 Priority

Area orientation panels

Parks and Richardson Highway orientation panels

Evaluation Procedures

Communication is a skill because things — concepts or knowledge, attitudes, etc. — *change*. As an example, people communicate about recycling because they want others to recycle. As another example, communication about health care is usually about it getting people to change, or at least to support communication efforts.

Evaluation is a type of communication that, to be profitable, must cause things to *change*. Good things, attitudes and behavior that are desired, desired by the marketing agency and the audience or even also by the audience of the agency and a management goal for the work. Consequently, the evaluation procedure must begin by identifying the specific changes desired as a result of participating in an interactive strategy. These can usually be identified by listing the objectives, including the goal of the action.

Once these changes have been identified, they must be converted to quantifiable objectives — something that can be measured. For example, if one of the actions you want is for people to donate money, or to send cards, the questions "How much money?" and "How many more cards?" and "What percentage of people donated?" become key questions to answer in order to establish quantifiable indicators. Once quantifiable objectives have been determined, you can begin to change.

Evaluation Procedures

The key to evaluation is to know what you are trying to measure. This is a common mistake. For example, if you are trying to measure the number of people who have been recruited in the program, but you don't know if they already knew those people when they recruited you don't know what you're measuring.

The question also determines that you are trying to measure. For example, if you are trying to measure the number of people who have been recruited, you may consider a recruiting effort, but not after the information is available, because with the intent of trying to determine if number of "recruits" changes, or not, or if the area begins to matter. If the objective involves number of people using a particular product, or is going to a particular survey, particular sample items can be used to measure patterns of behavior or behavior in use. If the objective involves change in knowledge, the pre- and post-experience survey is the most reliable. The number must be used to create dependable data. Consider the following points:

- 1. People who are a commercial, not a particular, using money don't fit in the category, so the questionnaire must be very short or the answer will be ignored.
- 2. Creating people makes them to focus on the information relating to the product, so the same people shouldn't be used in the next survey.

Level 4 Priority

The remaining 8 interpretive panels located at:

Level 5 Priority

Front Porch Interpretive Trail

Under Interpretive Trail

Panel at junction of Old and New Trails Highway

Level 6 Priority

Area around pond

Park and Schuylkill Highway junction

Evaluation Procedures

Evaluation Procedures

Communication is a tool to cause change -- change in knowledge, attitude and/or behavior. As an example, people communicate about recycling because they want others to recycle. As another example, communication about conservation is usually aimed at getting people to conserve, or at least to support conservation efforts.

Interpretation is a type of communication that, to be justifiable, must cause changes in visitor knowledge, attitude and behavior that are deemed desirable by the managing agency and that contribute in some way to the mission of the agency and management goals for the area. Consequently, the evaluation procedure must begin by identifying the specific changes desired as a result of participating in an interpretive strategy. These can usually be determined by filling out the questionnaire included at the end of this section.

Once those changes have been identified, they must be converted to quantifiable objectives—something that can be measured. For example, If one of the actions you want is for people to donate money, or to visit again, the questions "How much money?" and "How many return visits?" and "What percentage of people returning?" become key questions to answer in order to establish quantifiable indicators. Once quantifiable indicators have been determined, you can test for change.

The key to testing for attitude, knowledge and behavioral change is pre- and post-experience testing. Conducting an exit survey may indicate that everyone knows the major points communicated in the program, but you won't know if they already knew those points when they arrived if you don't also conduct a pre-visit survey.

The quantifiable indicators that you are testing for will determine the technique used for testing. For example, if you are trying to reduce inadvertent destruction of a fragile area due to trampling, you may conduct a trampling study before and after the information is available, observe with the intent of trying to determine if numbers of "trampers" decreases, or just see if the area begins to recover. If the objective involves numbers of people using a particular resource, or engaging in a particular activity, periodic sample counts can be used to establish patterns of increase or decrease in use. If the objective involves changes in knowledge, the pre- and post-experience survey is the most reliable, but caution must be taken to ensure dependable data. Consider the following points:

- People visit for a recreational, fun experience; testing usually doesn't fit in that category, so the questionnaire must be *very* short or the answers will be invalid.
- Pretesting people causes them to focus on the information relating to the pretest, so the same people shouldn't be tested in the exit survey.

- You don't need to test everyone. A sample will do.
- Good interpretive programs use facts to communicate concepts, so testing should be for concepts and impressions, not recall of facts. For example, you could ask a simple series of true-false questions relating to the resources and attributes of the surrounding area to determine before and after impressions of the value visitors place on the area. Other information gathering techniques involve asking for a priority assessment and ranking of a group of similar actions or values such as protecting wildlife, protecting habitat, and providing food for wildlife. Another technique is to use a Likert scale (a scale from High to Low), which can be effective in determining changes in attitude. In each case, you can test for change in impressions instead of just retention of facts.
- Comment cards and voluntary questionnaires are not particularly valid because self-selecting opportunities tend to be used only by those who are highly motivated—either the very upset or the very excited.
- As a final note, you can gather useful data without paying big dollars for a complicated testing procedure. Such data can be very helpful in modifying and improving your program. For example, our analysis of common visitor questions and complaints is not statistically quantifiable, but it gives us enough insight into visitor expectations and desires to proceed with interpretive planning.

Objectives Worksheet

This sheet can be used to establish visitor change objectives which can then be converted to quantifiable indicators.

Please complete the following sentences as many times as you need to. Use additional sheets, if necessary.

1. After visitors finish with this interpretive opportunity, I want them to know *that*

a.

b.

c.

2. After visitors finish with this interpretive opportunity, I want them to *feel*
_____ (*emotion*) _____ because of _____ (*specific event or circumstance*) _____.

a. _____ because of _____.

b. _____ because of _____.

c. _____ because of _____.

3. Finally, I want these changes in knowledge and attitude to translate into behavior.
Specifically, after visitors have finished with this interpretive opportunity, I want them to
_____ (*action*) _____.

a.

b.

c.

Objectives Worksheet

1. I will be able to identify the objectives of the project and explain why they are important.
2. I will be able to identify the objectives of the project and explain why they are important.
3. I will be able to identify the objectives of the project and explain why they are important.
4. I will be able to identify the objectives of the project and explain why they are important.
5. I will be able to identify the objectives of the project and explain why they are important.
6. I will be able to identify the objectives of the project and explain why they are important.
7. I will be able to identify the objectives of the project and explain why they are important.
8. I will be able to identify the objectives of the project and explain why they are important.
9. I will be able to identify the objectives of the project and explain why they are important.
10. I will be able to identify the objectives of the project and explain why they are important.

Methodology

Introduction

The following section contains the step-by-step breakdown of the approach used to complete each phase of the project.

Work Plan

Phase 1—Background Report

1. General project preparation. This step included the following tasks:

- 1-1. Obtain and review all relevant information associated with the project including:
 - Rocks, Bridges & Canals: Archaeological Trail Along the Coastal Highway;
 - Coastal Highway Information System; the Bureau of Land

Appendix A: Methodology

Management along the Highway between Oxnard and Whittier. It also included:

- AICPA/PP Coastal Highway Milepost 22-47 construction plan;
- existing management plans for the Coastal Highway;
- various documents of use information for the highway and area along the highway.

1-2. Visit Glenadales to develop the following:

- Interview participants of the Interpretive Planning team regarding needs, resources, available information, concerns, and constraints (restrictions) that relate to the project.
- Facilitate a meeting related to developing a narrative of goals and objectives, and a hierarchy of values for the Trail of Arrows.
- Visit the Coastal Highway in the company of participants of the planning team and conduct a visual survey of the cultural and natural resources within the highway corridor. Use visual resources with the Project Area and identify any nearby existing interpretive opportunities.

Appendix A: Methodology

Methodology

Introduction

The following section contains the step-by-step breakdown of the approach used to complete each phase of the project.

Work Plan

Phase I—Background Report

1. General project preparation. This step included the following tasks:

- 1-1.** Obtain and review all relevant information associated with the project including:
 - Rocks, Ridges & Glaciers. A Geological Tour Along the Denali Highway;
 - Denali Highway Information Plan for the United States Bureau of Land Management;
 - Denali to Wrangell-St. Elias: Assessment and Management of Scenic Resources along the Highways between Denali and Wrangell-St. Elias National Parks;
 - ADOT&PF Denali Highway Milepost 21-42 construction plan;
 - existing management plans for the Denali Highway;
 - visitor statistics or use information for the highway and sites along the highway;
- 1-2:** Visit Glennallen to accomplish the following:
 - Interview members of the Interpretive Planning team regarding target audiences, available interpretive resources, and parameters (constraints) that relate to the project.
 - Facilitate a meeting focused on developing a hierarchy of goals and objectives, and a hierarchy of themes for the Project Area.
 - Visit the Denali Highway, in the company of members of the planning team and technical specialists to inventory the cultural and natural features within the highway corridor, familiarize ourselves with the Project Area, and assess any nearby existing interpretive opportunities.

- 1-3: Review existing information obtained at the meeting to determine the extent of the current information base and to identify existing gaps.
 - 1-4: Locate, obtain and review any missing information critical to this project.
2. **Develop a hierarchy of goals and overall objectives.** This is a crucial first step in the planning process because it provides focus to the rest of the effort. This step included the following tasks:
 - 2-1: Review information related to goals.
 - 2-2: Obtain any necessary additional information on objectives from technical specialists and management personnel from all agencies and entities with jurisdiction within the Denali Highway corridor.
 - 2-3: Based on input from the Planning Team, develop a hierarchy of goals and overall objectives for an interpretive network that is based on the management philosophy for the area, and compatible with other interpretive opportunities offered within the area.
3. **Identify and Analyze Audiences.** Interpretation is a market product, and as such, it must be seen by visitors as valuable enough to merit their time—possibly the most valuable currency to most travelers. This means it is critical to have a clear understanding of the audience and what they find valuable. User and potential user groups must be identified, then analyzed in terms of needs, expectations, limitations and opportunities regarding information—both orientation information and interpretive information. Due to time and budget constraints, this was a compilation and analysis of existing information, not an original market survey. The following is a list of the tasks for completing this step:
 - 3-1: Review all information related to all current and potential audiences served within the Project Area.
 - 3-2: Interview recreation staff who work in the area about common questions and complaints. Both are key indicators of visitor needs and expectations for information.
 - 3-3: Divide the projected audience into segments based on shared needs, expectations and limitations.
 - 3-4: Based on site-specific visitor information, and basic knowledge of typical audience segments, prepare a list of relevant visitor characteristics by audience segment.

- 4. Prepare Resource Inventory.** People are more likely to believe what they see than what they are told. Consequently, it is far easier to communicate ideas that can be supported with physical evidence. The cultural and natural features along the highway, and accessible from the highway corridor, can therefore be thought of as props to tell a story, and as such, they help define what stories can be most effectively communicated at that place. Artifacts and specimens related to that cultural and/or natural landscape can also be thought of in this way. This part of the planning process inventories those resources to help identify potential interpretive opportunities, narrow down the focus of those opportunities and choose the appropriate vehicles for communicating key themes. From a planning perspective, it is important that this inventory take place as soon as possible in the planning process because it is a part of the Background Information on which all planning decisions are derived and justified. The inventory included the following tasks:
- 4-1:** Review any existing inventories of cultural or natural resources, including related collections of artifacts or specimens should any exist and be appropriate to this interpretive effort.
 - 4-2:** Visit the site to inventory cultural and natural features and gather information pertaining to each feature. This trip took place very close to the initial award of the contract due to the threat of the road being closed due to weather. As it was, only 2 days were spent on the highway before weather closed it for the season. Consequently, only a preliminary resource inventory was possible.
 - 4-3:** Prepare preliminary resource inventory.
- 5. Identify and Analyze Parameters.** Every design decision should reflect a philosophy of "doing the best you can under the circumstances." Consequently, planning should take circumstances into account. In Interpretive Planning, this step includes identifying and analyzing both the circumstances under which the opportunities must be developed—such as budget constraints, staffing levels, etc., and the circumstances under which they must function—such as weather, potential for vandalism, maintenance budget, surrounding attractions, and other site characteristics. The following were specific tasks completed in this step:
- 5-1:** Review existing management plans and other relevant documents to determine pertinent parameters relating to developing an interpretive network along the highway.
 - 5-2:** Interview maintenance staff to ascertain current level of maintenance required for existing interpretation, common maintenance problems with current interpretive facilities or devices, and current level of, and potential for, vandalism.

- 5-3: Analyze nearby interpretive opportunities in terms of types, focus and audience served. Ideally, the interpretive network will complement, not compete with, other attractions in the area.
- 5-4: Identify site-specific parameters such as access, competing attractions and fragile natural or cultural resources. (This will be accomplished during the initial site visit.)
- 5-5: Develop list of all relevant parameters.

6. Identify and Develop Theme Hierarchy

- 6-1: Based on input obtained in the initial meeting, identify and prioritize themes and sub-themes that support the goals and objectives of the interpretive network and the overall management goals for the area.

7. Prepare Draft Background Report. This report included the Goal Hierarchy, Audience Analysis, Preliminary Resource Inventory, and Parameters, and a listing and prioritization of proposed themes. Specific tasks included:

- 7-1: Prepare report as described.
- 7-2: Submit report. Reviewers then prepared and submitted comments on the report.
- 7-3: Modify background report as necessary based on comments from the reviewers.

Phase II - First Draft Interpretive Network Prescription

8. Develop and Refine the Draft Interpretive Network Prescription. This is the first step in developing the entire media prescription, which is the heart of the Interpretive Plan. It included a conceptual diagram of the proposed network, as well as identification and conceptual summary descriptions of each interpretive component in the network. The descriptions included suggested media, topic, theme, and sub-themes. This step included the following tasks:

- 8-1: Prepare a conceptual diagram of the interpretive and orientation network, noting justification, location (if applicable), and recommended media for each *component.

**Note: Each opportunity, such as an interpretive panel, an exhibit, an interpretive trail, or a video, is a separate component.*

- 8-2: Develop a conceptual summary description, including objectives, of each component.
- 8-3: Prepare a First Draft Interpretive Network Prescription.
- 8-4: Prepare presentation.
- 8-5: Visit the Project Area to field check the interpretive network prescription.
- 8-6: Field check the First Draft Interpretive Network Prescription with the Interpretive Planning Team and present the information in Glennallen, if necessary, and discuss questions, comments and concerns regarding the recommendations.

Phase III - Draft Interpretive Plan

9. Prepare Draft Interpretive Plan. This step included the following tasks:

- 9-1: Develop a Second Draft Interpretive Network Prescription based on the field check and comments from the Interpretive Planning Team.
- 9-2: Complete necessary information for each interpretive component. This included:
 - description
 - location (if applicable)
 - recommended media
 - themes, sub-themes and supporting information
 - *conceptual design, with supporting sketches as necessary
 - priority for implementation

**Note: This consists of a detailed description, and, if necessary, a sketch so a designer clearly understands the intent of the strategy. Conceptual design does not include text. Text writing is most appropriately accomplished during design in conjunction with final graphics since the two must complement each other. However, we do include a description of the information that should be used to support the recommended visuals.*

- 9-3: Prepare *cost range estimates for designing and fabricating each interpretive component.

***Notes:**

1. Accurate cost estimates cannot be developed until a component is fully designed. However, we can provide cost range estimates that will be useful in establishing priority for implementation and for future budget planning.
2. Cost range estimates are limited to interpretive components and do not include costs for site development or infrastructure.

- 9-4:** Prepare descriptions of evaluation techniques for each component.
- 9-5:** Prepare draft executive summary.
- 9-6:** Prepare draft introduction.
- 9-7:** Prepare draft appendices (methodology and information source list, which includes contacts and bibliography).
- 9-8:** Combine all sections to create draft interpretive site plan, and submit for review.

Phase IV - Prepare Final Interpretive Master Plan

10. Prepare Final Interpretive Master Plan. This step included the following tasks:

- 10-1:** Revise draft plan as necessary based on comments by reviewers.
- 10-2:** Prepare final plan, as described in the RFQ, and submit.

Goals

Introduction

Management is more than a process to achieve the project's operational objectives. It is a way of reaching the goals with information that can help an agent manage the resources. Consequently, one goal of management planning is to identify important opportunities that both enhance resources and simplify important information. This is achieved by providing a framework for the planning process by identifying the overall management goals for the year in which the management plan is made, then identifying specific management goals that will help to achieve the overall management goals.

As noted before, it is unclear what will be managing this year in the future, consequently it is difficult to derive important management goals for the management plan with any degree of confidence. For the purposes of this planning effort, it will be assumed that the same objectives in the highway will continue to be managed annually by the FHWA.

NOTE: A list of the goals of the management plan is provided in the Appendix B. The author is aware that the management plan is a document that is used to manage the management plan, and that the management plan is a document that is used to manage the management plan.

Appendix B: Background Information

Goal Hierarchy

Introduction

The Project Area is within the Interstate 70 Corridor. The Project Area is managed in accordance with the Management Plan for the Project Area, which was developed in 1970 and amended in 1975. The Project Area is managed in accordance with the Management Plan for the Project Area, which was developed in 1970 and amended in 1975. The Project Area is managed in accordance with the Management Plan for the Project Area, which was developed in 1970 and amended in 1975.

In these plans, primary goals have been identified as a means of helping to reach management goals involving enhancing operational performance and protecting resources through achieving actions to the value of these management goals. The following management program goals and objectives were established for an informational and management program along the Interstate 70 Corridor. The following management program goals and objectives were established for an informational and management program along the Interstate 70 Corridor.

3-4: Prepare development of exhibits to support the study objectives.

3-5: Prepare draft interpretive plan.

3-6: Prepare draft interpretive plan.

3-7: Prepare draft interpretive plan, including the interpretive plan, which includes the interpretive plan and the interpretive plan.

3-8: Complete all exhibits to support the study objectives, and submit for review.

Phase IV - Prepare Final Interpretive Master Plan

15. Prepare Final Interpretive Master Plan. The final interpretive master plan is the final product of the study.

15-1: Review draft interpretive plan, including the interpretive plan, which includes the interpretive plan and the interpretive plan.

15-2: Review draft interpretive plan, including the interpretive plan, which includes the interpretive plan and the interpretive plan.

Appendix B: Background Information

Goals
Audience
Parameters
Resource Inventory Summary

Goals

Introduction

Interpretation is more than a product to enhance the public's recreational experience; it is also a tool for reaching the public with information that can help an agency manage the resource. Consequently, one goal of interpretive planning is to identify interpretive opportunities that both enhance recreation and supply important information. The key to creating such opportunities is to begin the planning process by identifying the overall management goals for the area in which the interpretation takes place, then identifying interpretive program goals that nest beneath and help to achieve the overall management goals.

As noted before, it is unclear who will be managing this area in the future, consequently it is difficult to derive interpretive program goals for this interpretive network with any degree of confidence. For the purposes of this planning effort, it will be assumed that the area adjacent to the highway will continue to be managed primarily by the BLM.

NOTE: It is not the role of this planning process to re-examine that set of overall goals, but rather to develop a set of interpretive program goals that are compatible. As the overall management goals change, the interpretive program goals—and the entire program—must change accordingly.

Goal Hierarchy

Introduction

The Project Area is within the boundaries of BLM's South Central Planning Unit and is managed in accordance with the Management Framework Plan (MFP) for the unit, which was developed in 1980 and amended in 1983 and 1985. Parts of the Project Area fall under more specific and restrictive plans, such as the Cultural Resources Management Plan for the Tangle Lakes Archaeological District, and the management plans for the Delta National Wild, Scenic and Recreational River and for the Gulkana National Wild River.

In those plans, interpretation has been identified as a means of helping to reach management goals involving enhancing recreational experiences, and protecting resources through educating visitors to the value of those resources. The following interpretive program goals and objectives were established for an informational and interpretive program along the Denali Highway that will help to achieve those management goals.

Primary Interpretive Program Goals and Objectives

NOTE: Some objectives support more than one goal, and therefore may occur more than one time in this listing.

An information network, which includes both interpretive and orientation information, can help achieve the management goals of protecting the resources and enhancing recreational experiences by accomplishing the following:

- 1. Protect the resources by reducing human impacts to the ecosystem.** This can be achieved by increasing personal stewardship, which can be accomplished by reaching the following objectives:
 - 1-1. Make visitors aware of the personal value of the cultural and natural resources along the Denali Highway.
 - 1-2. Make visitors aware of the susceptibility of those resources to human impacts.
 - 1-3. Make visitors aware of their personal impacts to those resources and how to minimize those impacts.
 - 1-4. Make people aware of use restrictions related to protecting those resources.

NOTE: In essence, the goal is to create or heighten the visitors' environmental ethic so travelers will be good stewards.

- 2. Protect the resource by increasing support for management policies.** This can be achieved by reaching the following objectives:

NOTE: Management ultimately is dictated by the public so public support of management philosophy is important. Support can come in part through understanding of an area.

- 2-1. Make visitors aware of the personal value of the cultural and natural resources along the Denali Highway.
 - 2-2. Increase understanding of the ecosystems that provide the context for those resources and make visitors aware of the susceptibility of those ecosystems and resources to human impacts.
 - 2-3. Make people aware of the connection between that susceptibility to negative human impacts and management policies aimed at protecting the environment.

- 2-4. Raise awareness of the identity of the managing agencies and of the cooperative nature of the management effort.
- 2-5. Raise awareness of the unique political circumstances affecting management of the adjacent public lands. This includes subsistence hunting, the presence of an Archaeological District, mining activities, the National Wild Rivers, management by several agencies, and perhaps the agreement governing selection of lands by the State and Ahtna, Inc.

3. Contribute to appropriate and satisfying recreational activities and use patterns.

This can be achieved by reaching the following objectives:

- 3-1. Create appropriate expectations among visitors as to the nature of a trip on the Denali Highway.
- 3-2. Facilitate recreational experiences by providing an effective orientation system that serves all segments of the recreating public. The system will orient not only to the transport system and services, but also to the recreational and informational opportunities.
- 3-3. Increase the degree of safety by making all visitors aware of the hazards associated with being in Alaska generally, and with each recreational activity specifically, including traveling the Denali Highway, backpacking, etc.
- 3-4. Enrich the recreational experience by providing a satisfying interpretive experience focusing on the natural and cultural resources along the route.

All the Interpretive Program goals are consistent with the following plans:

Cultural Resources Management Plan for the Tangle Lakes Archaeological District which noted that interpretation of cultural resources can help public understand the importance of these resources and add to the enjoyment of the area.

The Management Framework Plan which noted under the rationale for Recreation Activity Recommendation R-4.1, *develop an interpretive program for the Denali Highway using the Denali Highway Information Plan as a base study*, that proper use of the area can be encouraged by increasing the understanding of the biological and physical attributes of the area.

Management Plans for the Delta and Gulkana National Wild Rivers which notes that interpretive methods can be used to enhance enjoyment and promulgate river management policies. Both plans call for using interpretation on information boards at put-ins and nearby campgrounds.

Audience

Introduction

A key to developing an effective interpretive program is an understanding of the visitors who will participate in it. Information is a market product in that people must "buy" it with time—their most valuable currency—and perhaps effort and money. We cannot expect visitors to "buy" an interpretive experience unless we offer them a product that is worth buying. Interpretive experiences that visitors are willing to buy can generally be described as ones that meet the needs and expectations of the visitor, that are within the visitor's limitations of time, money, energy, etc., and that can compete successfully with other options for spending time, usually through association with visitor interests that were the reason for the visit in the first place. In summary, those categories of visitor characteristics are as follows:

Needs include basic amenities, such as food, shelter, bathrooms, and orientation. Visitors need orientation information to feel comfortable in their ability to cope with an unfamiliar environment and will not be receptive to interpretive information until properly oriented.

Expectations are much more variable because they are created. Visitors will expect a certain level of service, a certain type of experience, and certain information based on what they've heard and seen regarding a particular area.

Limitations are related, in part, to the leisure orientation of the target audience. Visitors generally do not want to "work"—either physically or mentally—at their recreation unless the reward is worth the effort required. This has important implications in the selection and design of interpretive strategies and programs. For example, publications must be written so they are relatively easy and rewarding to read. Interpretive tours must be within time limits of the visitor. Interpretive signs should be designed for legibility, among other factors, to reduce effort so it is within the capabilities of the visitor to read the text. Limitations can also be related to physical ability, language, education level, and background.

Visitor Interests are related to the stories, features and activities that are available within the Project Area. Providing interpretation that addresses the specific interests of the target audience will help to provide a satisfying experience for the visitors.

This audience analysis focuses on identifying the major visitor segments and constructing a profile of each of those segments based on needs, expectations, limitations and interests. Since needs, expectations, limitations and opportunities are directly related to, determined by, and vary according to the visitor, it is important to identify typical visitor segments, then build a profile of that segment. Some characteristics, however, will be shared by all visitor segments. Those characteristics are as follows.

General Audience Characteristics

Many travelers will be unfamiliar with this environment. Visitors want to know where they are in relation to where they want to be, and in relation to where their basic needs—food, water, shelter—can be met. Until this basic orientation information is supplied, the visitor is generally unreceptive to interpretive information, so it must come first. In addition, safety information must be conveyed to all travelers on the highway, before they arrive, if possible, so they will come prepared for their trip.

Any given visitor segment will have a variety of impairments represented. The interpretive network should include an array of opportunities to get the same information. As a whole, that array should make the information accessible to all people, despite any impairment, whether it be visual, auditory, physical or otherwise.

Visitors will have varying limitations in terms on energy, time, interests, and preferred learning styles. It is in the best interests of the provider for the visitor to take part in interpretive opportunities because they will help in protecting the resources. Since interpretation is optional, the provider must make the effort to package the information in a variety of forms to appeal to basic variations in preferences. In other words, the interpretive program should provide optional opportunities that accommodate the basic learning styles of observation, social interaction, and hands-on experience, to the extent possible; information must be presented in a way that is rewarding, within the limits of a "leisure" activity, and arranged thematically to keep effort within the visitor's limitations; and the interpretive program should offer opportunities to "skim," "browse," or "gorge" the information to accommodate preferences and to accommodate visitors on a tight schedule.

Visitors will have varying degrees of basic knowledge about Alaska. The interpretive program must not assume any knowledge on the part of the visitor and so must include basic information about Alaska in general and the area specifically. However, it must be presented in an optional manner so that those already familiar with basic information can move on. This basic information must include safety information for traveling the highway or recreating in the surrounding environment.

Visitors will have varying degrees of educational background. The interpretive program must offer information at different levels.

Families and other similar groups have a variety of educational levels *within the group*. The interpretive program should provide *several* opportunities, aimed at different levels, in one location so everyone can be involved at the same time.

Groups, especially families, expect to interact with each other while participating in the interpretive experience. The interpretive program should provide opportunities where all members of a family or group can be involved at the same time, despite having different

educational or experiential backgrounds.

People tend to visit in groups—family or friends, some of which may include the elderly and physically challenged. Interpretive opportunities such as signs and exhibits should be designed to accommodate at least small groups, and must be appropriate for a variety of physical and educational abilities.

Denali Highway Visitor Characteristics

Introduction

Not much is known specifically about visitors to the Denali Highway due to lack of any current studies on the subject. Therefore, information on travelers has been gathered from a variety of sources, including the study from the 1976 Denali Highway Information Plan, conversations with people who live and work in the area and inferences based on experience and knowledge regarding travelers in general and travelers in Alaska specifically. The following section represents the sum of that information.

Visitor Groups

For the purposes of this planning effort, the travelers on the Denali Highway have been divided into the following segments:

- 1. Visitors traveling the Denali Highway as their primary recreation experience.** This group can be subdivided into visitors traveling in tours, and independent travelers. No distinction is made between Alaskans and visitors from out-of-state because that distinction does not affect the interpretive or orientation network significantly.
- 2. Travelers using the Denali Highway to access other recreational opportunities.** These people are focused more on backpacking, ATV riding, snowmobiling, hunting, fishing, birdwatching, photography or some other opportunity as the primary recreational activity. For some of these, traveling the Denali Highway is an integral part of the recreational experience. For others, it is simply a means of access. Again, no distinction is made between Alaskans and visitors from out-of-state because that distinction does not affect the interpretive or orientation network significantly.
- 3. People traveling the highway for purposes other than recreation.** This would include those for whom gathering food by hunting, fishing or other means is an important and integral part of their lifestyle. It would also include those who live along the highway, and those who are using it as a transit route to access Denali National Park or the Wrangell Mountains.

Of these groups, the first is the most likely to be receptive to interpretive information. Receptivity will vary more within the second group depending in part on the activity and in part on the particular person. However, most people in this group will be very interested in orientation information related to their desired activity. Therefore, coupling interpretive

information with the desired orientation information may be very effective. The third group is likely to be much less receptive to interpretive information, and may already know enough about the area to have little interest in orientation information. This group will not be a specific target of the interpretive network, but should be considered when developing the orientation network, which will include rules and regulations and safety information.

Visitor Group Profiles

1. Visitors traveling the Denali Highway as their primary recreational experience.

These travelers are traveling the Denali Highway to partake of the scenery, primarily from their vehicle. They may choose to get out and walk short distances, take some pictures, or have a picnic, but the majority of their time will probably be spent in the vehicle, especially if they are on a guided tour. Most will be interested in information about the natural and cultural history of the area. According to the survey conducted for The Denali Highway Information Plan, natural history will be the most common interpretive interest generally, with geology, wildlife and vegetation the most desired topics. In terms of cultural history, native peoples, the gold rush and current mining activities were the primary topics of interest. Many will be under time constraints because they are not staying along the Denali Highway or in the nearby vicinity, or they are on a tour where the schedule is fixed. Though under time constraints, many will choose to have lunch at one of the lodges along the route.

Numerous short interpretive opportunities, and/or opportunities that can be taken advantage of while driving, would be more appropriate for visitors under the time constraint of having to make this trip in a single day. This would include signs at pullouts, short interpretive trails, and auto tours. For all of these travelers, opportunities at the eating establishments that can be taken advantage of during meals, such as table teasers, would also be effective. Opportunities advertised in a "menu" based on time required will allow the flexibility to address all visitor schedules.

For those traveling on a guided tour, whether a bus tour or an adventure tour, pre-trip opportunities would be effective for focusing attention during the tour, and information available through the tour guide or driver, or through a tour booklet geared to what can be seen from the highway, would be effective techniques. For travelers on such trips, opportunities that can handle groups of people will be necessary. Partnerships with companies offering such tours are a possibility.

2. Travelers using the Denali Highway to access other recreational opportunities.

This group of travelers will be focused on their activity so they may not be interested in spending time on interpretive opportunities. Recreationists will actually be out in the environment, off the road, so it is essential that they be familiar with rules and regulations, as well as safety information. However, they may have limited space for carrying books or other publications when exploring, so they will need information in a compact form that they can take with them.

Though they may not have as much interest in interpretive information while engaged in their activity, many will stay in the area for several days at campgrounds, lodges, or in trailers.

Interpretive information tied to orientation information specific to their activity, and/or interpretive information relating to their activity may be a way to successfully attract the interest of this group of visitors. Also, interpretive opportunities at eating and lodging establishments and campgrounds may be effective.

Parameters

Introduction

Parameters are those conditions under which an interpretive strategy or network must be developed, such as monetary constraints, and under which it must function, such as climate and maintenance budget and staff. Identifying parameters ensures selection of strategies that are effective and realistic, not idealistic.

In reviewing the following section on parameters, it is important to remember that they are limited to those conditions that may have significant impact on the *interpretive* program, not on *managing* the Project Area. They also represent what *is*, not what should be or what is desired.

Budget

- B-1. The budget for developing interpretive opportunities is unknown, but likely to be limited.**

Low cost interpretive opportunities, and those that are of interest to potential partners, are more likely to be implemented. Also, components of the interpretive network should be chosen and conceptually designed so they work in the context of a larger network, but also stand alone. That way, opportunities can be developed individually, with small chunks of money.

- B-2. The budget and time available for maintaining interpretive opportunities is likely to be limited.**

Low maintenance interpretive opportunities are more desirable.

- B-3. The BLM is unlikely to invest heavily in interpretive opportunities in areas that may be conveyed, other than the Tangle Lakes Archaeological District.**

It is likely, with the uncertain management status of most of the land along the easement, that the BLM will not invest their own funds heavily in interpretive opportunities outside the Tangle Lakes Archaeological District and the National Wild and Scenic Rivers that will remain under their management. Most opportunities will probably be developed using ISTEAF funds. Evaluation criteria for TEA-21 nominations should be a consideration in developing the interpretive network.

- B-4. The state has indicated that conveyance of lands along the highway to the state is, in most cases, not a high priority and is therefore not likely to occur for at least 5-10 years.**

If an effective interpretive network is going to be developed soon, the BLM will have to be the main developer. Low cost and low maintenance opportunities in areas selected by the state will probably be easier to get implemented.

- B-5. The state has also indicated that the Department of Transportation is not likely to have the time or funding to maintain facilities along the route. It can be assumed that they are not likely to have the funding to develop additional opportunities either without partners in such an endeavor.**

Again, low cost and low maintenance opportunities in areas selected by the state will probably be easier to get implemented.

Note: This does not preclude suggesting appropriate opportunities for those areas of the road not considered a high priority. It does mean that opportunities will have to stand alone because of the uncertain nature of funding for lower priority opportunities.

Staffing

- S-1. It is unlikely that any managing agency, including the BLM, will commit staff on a consistent basis, other than volunteer campground hosts, to any interpretive function along the highway.**

Self-guided activities will be an important aspect of the program.

- S-2. Assuming funding levels are adequate, the BLM will probably continue to have campground hosts at Brushkana and Tangle Lakes campgrounds.**

Staff presence, even if only a campground host, creates opportunities for more extensive publication distribution.

Vandalism

- V-1. Vandalism along the route is currently low. However, due to the heavy use of the area for hunting, vandalism in the form of gunshots should be expected.**

Materials should be selected with vandal resistance in mind.

- V-2. Vandalism may rise if the road is paved due to increased accessibility and shifting use patterns.**

The interpretive network may require more maintenance on fixed opportunities and structures if and when the road is paved.

Location and Access

- L-1. Access is limited to one access point on the Richardson Highway and one on the Parks Highway.**

It will be easy to provide easily accessible orientation information to most travelers.

- L-2. The Denali Highway is in the middle of two popular recreational loops in terms of driving tours, one of which begins and ends in Fairbanks, and the other in Anchorage.**

Alaska Public Lands Information Centers (APLICs) and Visitor Guides put out by the local Convention and Visitor Bureaus in both cities are key opportunities for orientation and safety information necessary for having visitors plan and prepare adequately before they begin their trip.

- L-3. The road connects two National Parks and Preserves—Denali National Park and Wrangell-St. Elias National Park.**

This creates the opportunity for a partnership with the National Park Service if they want to incorporate the Denali Highway into a much larger interpretive and information network involving both parks.

- L-4. The area is remote.**

Few emergency services, including communication facilities, are available to the traveler along the highway. The situation makes it important to provide basic orientation and safety information to the traveler before they begin their trip and along the way. Information at either end of the highway will be important.

- L-5. The area is far from the Field Office at Glennallen.**

Time required for visiting and maintaining the area is significant thus non-personal, low maintenance opportunities are preferred.

Physical Infrastructure

- P-1. The Denali Highway is currently an unpaved road.**

Travel will be somewhat slower due to the graveled uneven surface. A good deal of time will actually be spent driving, leaving less available for interpretive stops if the traveler is not staying along the way. Also, it will be difficult for travelers to read while traveling due to the uneven road surface.

Note: This is not intended to imply that the lack of pavement is a negative in terms of the interpretive experience. In fact, traveling more slowly will allow more focus on the environment, thus creating the potential for a better interpretive experience in our opinion. However, the consequent duration of the trip and uneven road surface do limit the array of effective media that can be used to convey information.

The road conditions also lead to many flat tires. (According to an employee at Paxson Lodge the gravel road surface is a common complaint). Travelers should be made aware of this possibility, and about the lack of services along the way so they can plan accordingly.

P-2. Paving is being considered for the Denali Highway.

The State Department of Transportation is currently reviewing plans for resurfacing the highway and is seeking public comment. (A recent State of Alaska survey showed that 85% of the highway visitors were opposed to paving the Denali Highway). If paving occurs, the amount and type of visitation will shift as will the patterns of use. Rental cars will be allowed on the road and more tour buses will include the Denali in their itinerary. Travelers may take the road faster and at more of a constant pace, thus creating the opportunity for an audio tour. Instead of the Denali Highway being a destination for travelers, it may become a travel corridor. The interpretive program must be flexible enough to adapt to this change should it occur, which will include having opportunities designed to handle more visitors than will initially be present.

P-3. Existing plans call for 37 more pullouts along the route.

These would be prime locations for interpretive information, whether the information is delivered via publication or signage.

P-4. ADOT is currently planning to develop a roadside rest stop at the entrance to the Tangle Lakes campground.

This will become a prime stopping place for travelers and therefore a prime opportunity for dispensing visitor information.

P-5. Two public campgrounds and a private campground are located along the route.

These should be prime locations for dispensing visitor orientation information.

P-6. The highway currently has few outhouses available along the way with little chance of adding any beyond what is already being planned. No agency has the resources and/or is willing to commit resources necessary for maintaining additional outhouses along the route. The information network must make this situation clear to visitors before they embark on their trip.

- P-7. Outhouses exist at the campgrounds and at Clearwater Creek (MP 56). Additional outhouses are planned for Maclaren Summit.**

These are prime locations for visitor information.

- P-8. There are no public access buildings along the way, however, there are private lodges offering lodging and food along the way.**

Though the managing agency has no indoor space to dedicate to information and interpretive opportunities, there are opportunities for table teasers, small exhibits, distribution points for publications and information in guest rooms.

- P-9. Several interpretive and orientation panels are already in place along the highway.**

If possible, these should be incorporated into the network to conserve resources. However, if they constrain the development or design of the network significantly, they can be removed.

Environmental Conditions

Note: This report does not attempt to list all environmental conditions, just those that have some bearing on developing and maintaining an interpretive network.

- E-1. Parts of the environment are highly susceptible to human disturbance.**

It will be important to use the interpretive program to inform people about the vulnerability of the ecosystem, and how they can minimize negative impacts they could have on the ecosystem.

- E-2. The area contains natural hazards such as bears and bad weather.**

Travelers must be informed of potential hazards and how to be prepared to deal with them. Ideally, this information should be available before visitors embark on their trip.

- E-3. Visibility on the highway may be impaired due to dust, snow or curves.**

Drivers must be informed of these hazards and how to be prepared to deal with them.

- E-4. Road and weather conditions change quickly.**

The interpretive program must make visitors aware of the potential changes that may occur in weather and road conditions, and provide information to help visitors be prepared. Ideally, this information should be available before visitors embark on their trip.

- E-5. It will remain light much of the night during the summer visitation season.**

Interpretation on light and dark cycles will be highly appropriate. Interpretation, including outdoor activities, can continue into the evening.

- E-6. The road is closed to regular traffic about half of the year due to accumulation of snow. Travel during the other months is by snow machine, dog sled, or other similar means.**

The primary users of the interpretive program will be summer travelers. Interpretive signs should be designed so they can be removed.

- E-7. Weather can be extremely hard on structures and signage, thus requiring additional maintenance and replacement costs.**

Low maintenance opportunities and weather resistant materials are both highly desirable.

- E-8. Many parts of the environment, such as areas of tundra at Maclaren Summit, are very susceptible to human disturbance.**

Interpretive opportunities should avoid encouraging travelers to walk in such environments. If interpretation is desirable, structures such as decks and boardwalks should be used to funnel visitors and protect the environment.

Policy and Legal

- PL-1. The status of ownership of much of the land adjacent to the Highway is uncertain due to the fact that much of it has been selected by the State under the Statehood Act, or by Ahtna, Inc. under the 1971 Alaska Native Claims Settlement Act (ANCSA).**

Whether it will remain selected or not is unclear. Nor is it clear when conveyance will occur if the land remains selected. Until the selection process is completed, ownership—and consequently management philosophy—will not be known. Since interpretive program goals are derived from the management philosophy, it is difficult to derive the goals for an Interpretive Network with any degree of confidence. For the purposes of this project, it will be assumed that the BLM will continue to be the primary manager of the lands adjacent to the highway. Also, since the situation regarding land ownership, and therefore allowable activities, may change at any time, the interpretive program should be flexible enough to allow for changing information.

- PL-2 The first approximately 20 miles of the Denali Highway from Paxson have already been conveyed to or have been selected by the State (except for an area around mile 10). However, the State has indicated that the Alaska Department of Transportation (ADOT) does not currently have the resources to manage facilities.**

It is unlikely that ADNR will be a source of funding for any partnerships involving interpretive opportunities or facilities in this section. It is also unlikely that ADNR will develop any additional interpretive opportunities or facilities in this stretch due to budget constraints. Consequently, it may be difficult to develop a portal facility such as an unstaffed kiosk, in this stretch.

- PL-3. A significant amount of the land adjacent to the highway on the west end of the route is privately owned.**

Establishing an unstaffed orientation kiosk nearer the west access than the current orientation panel may require negotiations with private landowners if the best choice for such a facility is on private land.

- PL-4. The area is heavily used for subsistence hunting and food gathering.**

The interpretive program may want to make out-of-state visitors aware of subsistence uses of resources, and the policies and regulations associated with this program.

- PL-5. Mineral extraction activities may occur in the vicinity.**

The area is not managed to maintain the current viewsheds. The interpretive program must be prepared to adjust if interpreted viewsheds are developed for mining operations. The interpretive program may want to make visitors aware that this activity is occurring, and that it is legitimate.

- PL-6. The Tangle Lakes Archaeological District is on the National Register of Historic Places and has additional use restrictions to protect the cultural resources in the area.**

Use of and management policies for this area are not likely to change even if the land manager changes, thus interpretive goals and therefore interpretive opportunities in this area can be recommended with a higher degree of confidence. The interpretive program should include information on these additional restrictions, and the reasons behind those restrictions.

- PL-7. Alaska Department of Fish and Game has established Controlled Use Areas and Closed Areas along the highway to provide for non-motorized hunting opportunities.**

This creates an opportunity to interpret the relationship of management policy to value of the resources.

PL-8. The Alaska Department of Transportation (ADOT) has jurisdiction over all signage in the highway easement.

All signage must meet and conform to ADOT standards.

PL-9. Some of the land adjacent to the Denali Highway is private.

The interpretive program must inform visitors of areas that are not available for their access

PL-10. The BLM will continue to manage the Delta National Wild, Scenic and Recreational River, and the Gulkana National Wild River.

Use of and management policies for this area are not likely to change significantly, thus interpretive goals and therefore interpretive opportunities in this area can be recommended with a higher degree of confidence.

PL-11. Improvements from MP 21-41, including interpretive opportunities, have already been planned. However, implementation is on hold.

These plans should be considered during development of the interpretive plan, but the planning process should not be constrained by this existing set of plans. The interpretive and information opportunities and guidelines already planned are as follows:

Theme: This changing/dynamic earth.

Note: That theme can be restated as follows:

- *The landscape surrounding you is the continually evolving product of a variety of forces acting over time.*
- *The landscape is dynamic, constantly evolving in response to a variety of forces, including human influence.*

The restated themes may give somewhat clearer direction to the type of information, beyond topic identification, that should be included in the interpretive opportunities.

Opportunities: The existing plan calls for the following informational and interpretive opportunities to be implemented within this stretch of highway.

Tangle Lakes Entrance Road and Rest Stop

- Orientation panel focusing on the Denali Highway.
- Orientation panel focusing on the immediate area, with brochure dispenser.

- Interpretive panel focusing on the cultural and prehistoric uses of the Tangle Lakes Archaeological District (TLAD).
- Interpretive panel focusing on the natural history of the area, specifically, communities. Suggested topics include the climate; the relationship of the lakes to waterfowl; the willow browse for moose; the migration of caribou; and predators in the area such as fox, bear and wolf.
- Interpretive panel focusing on geology of the immediate area.

Round Tangle Lakes Boat Launch

- Orientation panel to Delta National Wild River, Gulkana National Wild River and river safety.

Delta National Wild River Wayside

- Orientation panel identical to area orientation panel at Rest Stop
- Interpretive panel focusing on natural history. Identical to panel at Rest Stop.

Delta National Wild River Boat Launch

- Orientation panel identical to panel at Round Tangle Lakes Boat Launch.

Tangle Lakes Archaeological District Overlook

- Interpretive panel focusing on the geology that can be viewed from this site.
- Interpretive panel focusing on the prehistoric people of the area.
- Interpretive panel focusing on how this area looked in the past.

Maclaren River Overlook

- Interpretive panel focusing on mountain building and glaciation.
- Interpretive panel focusing on climate and permafrost and features that result from those two forces.
- Interpretive panel focusing on the landscape.
- Interpretive panel focusing on the tundra, its relationship to climate, and the fragility of the area.

Landmark Gap Pullout

- Interpretive panel "Paths Across Time" will be relocated from the Rest Stop area to here.

Use Patterns

- U-1. Motor vehicle travel along the Denali Highway, with the exception of snow machines, is seasonal. The road is closed from approximately the middle of October until the middle of May.**

Most visitors do not see the harsh winter conditions during their stay. The interpretive program must act as a window to the harsh winter environment for the visitors to get a complete picture of the environment.

U-2. The route has increasing snowmobile use in the winter.

This creates opportunities for winter interpretive opportunities that are compatible with winter travel and use patterns.

U-3. Many ORV trails are being created by visitors.

Interpretation targeting this group of users should be a priority.

U-4. Use patterns will change if the route becomes paved.

More visitors will travel the highway, but are likely to spend less time along the way. Use may shift from a travel destination to a travel corridor. The interpretive plan should take this likely shift into consideration and include opportunities that are compatible with the anticipated new use patterns.

U-5. According to an employee at Paxson Lodge, most all tour buses on the Richardson Highway currently go at least to MP 7. Many then turn around.

Interpretive opportunities at a viewpoint within the first 7 miles could reach a lot of people who go on tours. Such an opportunity has possibilities for partnerships with tour companies.

Resource Inventory Summary

Introduction

In general, people become more interested in a subject when they can *see* something related to it, and they are more likely to believe what they can see than what they only hear or read. Therefore, the more an interpretive program connects with and uses actual artifacts or features in conveying information, the more effective the program will be. Resource inventory within the context of Interpretive Planning typically involves inventorying all artifacts and features available for inclusion in the interpretive program with the express intent of defining the limits on the stories that can be told effectively by establishing what visual evidence is available as support.

Summaries

This section of this report makes no attempt to duplicate the extent and detail of the information contained in The Denali Information Plan. Nor does it attempt to provide an exhaustive list of all the resources. It simply attempts to identify key features or characteristics along the highway that can be used as evidence to support concepts presented in the interpretive program.

Cultural History

Unlike the natural history of the area, the cultural history of the area does not have as much prominent visual evidence to support the stories. Though the area has substantial evidence of prehistoric use, that evidence is either invisible to the untrained eye, or is evidence that shouldn't be pointed out to travelers. Most of the evidence of cultural use that can be easily used as visual to support stories are related to historic use, such as the road and the few lodges along the way. However, the following are key sites or events that can be used to help present the story.

- The historic town site of Denali, a mining community, and the site of the Valdez Creek mine can be used to help tell the story of gold and its effect on the history of the area and of Alaska with specific regard to exploration, settlement and development. Gold was of such value that individuals were willing to go to great lengths and endure tremendous hardships to obtain the precious metal. It was so valued that discovery of gold led to settlement, and to development of transportation systems. The story at this site can be tied to the bigger story of the Klondike Gold Rush and its effect on Alaska.
- The town site and mine can also be used to support concepts associated with changing societal values, both among Native Athabascan culture and EuroAmerican culture. In terms of the Athabascan culture, mining was one of the influences that began the change from a hunting, gathering and trading culture to one of working for money, then buying what is needed. In terms of EuroAmerican culture, the site can be used in conjunction with other, more contemporary structures and facilities, to show a shift in the primary value of the area from mineral extraction to a wider array of values, including recreation.
- The migration route of caribou in general can be used to help tell the story of native Alaskan lifestyles—both prehistoric and contemporary. One good location for this story is

at the Landmark Gap viewpoint since this feature was a prehistoric caribou migration route and heavily used hunting area by the people who lived at that time.

- The Tangle Lakes Archaeological District can be used to tell the story of prehistoric Alaska Native lifestyles. It not only has one of the densest concentration of archaeological sites in the North American subarctic, but it also has an array of sites that represent a variety of activities relating to lifestyle. For example, there are hunting camps, chipping sites, hunting sites, travel routes, and places where prehistoric hunters watched for prey. The district can also be used for focusing on changing values and evolving cultures. Not only are 4 distinct cultural traditions for Native Alaskans represented, but modern EuroAmerican and Native Alaskan cultural traditions and values are still represented in the present use of the area.
- The lodges, and all the recreational developments, can be used to help tell a chapter of the ongoing development of Alaska, and can be used to support concepts associated with changing societal values. In other words, recreational opportunities are of much higher value in society today than previously.
- The eskers on which parts of the road is built were also prehistoric and historic travel routes. They can be used to tell the story of lifestyle of the prehistoric people, and also the story of similarities in how people use a landscape and resources over time.
- Borrow pits along the way are evidence of a value of contemporary society for the resources in the Denali area.

Wildlife

Several factors make this a good place to view wildlife, including the fact that much of the road is raised so there are many vistas, and the fact that much of the road is above timberline, allowing for clear viewing over a long distance. This inventory does not seek to list all the species of wildlife, nor identify all the locations where wildlife, or sign of wildlife, can be seen. It simply notes some of the characteristics of wildlife as a whole, and the concepts those characteristics can support.

- The area along the Denali Highway contains a wide variety of species of wildlife, especially bird life. This will support concepts associated with value, uniqueness, and susceptibility to human disturbance, which, in turn supports the concepts associated with management philosophy. The variety can also be used, in association with substrate, climate and vegetation, to support concepts associated with ecological relationships.

Examples of sites/features:

- The Tangle Lakes area, Mud Lake and other lakes along the highway, are major waterfowl habitat.
- The area around Brushkana Creek and around Tangle Lakes are well known for the bird life.
- Parts of the Denali Highway follow a major migration route for caribou that has been used since prehistoric times.

- Beaver dams and lodges can be seen in several places along the highway.
- The insect life, particularly butterflies, is abundant along the highway.
- The mosquitoes, which are one key to the food web that includes the bird life, are very noticeable along the route.

Vegetation

Of the 9 major vegetation systems found in Alaska, 7 can be found along the Denali Highway. Of those, 5 are dominant, occupying 90% of the area. Those include: Alpine Tundra-Barren Ground, Low Brush, Moist Tundra, High Brush and Bottomland Spruce-Poplar forest. (Note: The Bottomland Spruce-Poplar Forest, along with the Upland Spruce Hardwood Forest which can be seen all along the western portion of the road, are both parts of the Boreal Forest, or Taiga biome.) The following are examples of sites or characteristics of the vegetation that can be used in the interpretive program.

- The wide variety of habitats can be used to support concepts associated with relationship of wildlife to habitat, and importance of that habitat for sustaining populations of wildlife. For example:
 - Vegetation in Alpine Tundra contains important food for caribou, Dall sheep, black bear and grizzly bear. Other wildlife include coyotes, wolf, mountain goat, marmot, wolverine and pika. Birds in the area include ptarmigan, golden eagles, gyrfalcons, and snowy owls.
 - Moist tundra, for 7 miles to the west of Crazy Notch, is prime waterfowl nesting habitat. It also contains important habitat for grizzly, wolf, caribou, moose and fox. Surface water present during summer months and is extremely important as nesting area for trumpeter swans, ducks, geese, grebes and loons.
 - High brush areas critical for moose. Bears also make heavy use of berries in this zone.
 - Low Brush Muskeg-bog is critical habitat for moose, ducks and geese.
 - Riparian vegetation is important for migrating songbirds, and also as a source of calcium, a key component of moose antlers.

Note: Again, there is no attempt to list everything, just give an idea of the type of sites suitable for interpretive strategies.

- The array of vegetation systems can also be used to support ecological concepts and relationships associated with the influence of a wide array of factors in shaping the landscape since substrate is a key factor in determining vegetation patterns. One example is the array of wildflowers caused by the jumble of different substrates.
- Much of the road is above timberline, giving visitors a rare opportunity for relatively easy access to an alpine environment, creating good opportunities for education focusing on the value, fragility, and resulting management of such environments.

Geomorphology

This area contains some of the finest examples of glacial features and mountain shaping processes accessible by road in the United States. The following are key characteristics of the geomorphology that can be used in the interpretive program.

- Features associated with earth-shaping forces and events, especially glaciation are very prominent along the route. These will support concepts associated with the environment being unique, and being a product of many natural forces and processes acting over time. Examples of features:
 - The area contains a number of large, visible glaciers. Some good sites for viewing these glaciers include many of the pull-offs along the highway between MP 2 and MP 7; Maclaren Summit, and pull-offs around MP 93.
 - The area is drained by several river systems. The Gulkana drains into the Copper River basin which drains into Prince William Sound; the Susitna River drains into Cook Inlet; and the Nenana River and the Delta River drain into the Tanana which flows into the Yukon and then to the Bering Sea.
 - The road passes the Continental Divide just east of Monahan Flats.
 - The Alaska Range is a dominant feature all along the route, with many good viewing locations.
 - The area contains a large variety of glacial features visible along the road - kettle ponds, rock basin lakes, moraines, eskers, glacial outwash plains, erratics, kames, U-shaped valleys, cirques, drumlins and braided streams. Eskers are a key feature because most eskers in the lower 48 have been mined for the valuable gravel. Some especially good features and sites include Landmark Gap, Crazy Notch, the palsa at MP 41, the esker at MP 59, braided streams at several locations, glacial silt visible at the Susitna River crossing and a variety of features visible at Maclaren summit.
 - The area contains features created by the climate, most notably, those created by permafrost. These include palsas and rock glaciers.

Recreation

The area offers a wide variety of backcountry recreational opportunities, including viewing the scenery, berry picking, hiking, camping, river floating, canoeing, kayaking, mountain biking, hunting, fishing, photography, birdwatching, snowmobiling, cross country skiing and dog sledding. The area also contains a variety of facilities to support these activities, including campgrounds, boat ramps, designated ORV trails, road improvements such as pull outs, and the information system. These opportunities themselves help to achieve multiple use management goals. They can also be used to support concepts presented in the interpretive program. .

- The variety of recreational opportunities and supporting infrastructure present along the route can be used to support concepts relating to value by present society. They can also be used as part of a focus on changing societal values with regard to land and resources.
- Recreational facilities and opportunities can also be used to support concepts associated with the BLM's role in providing the array of products desired by the public.

Management

The area contains a variety of publically owned areas that are managed differently, such as the Tangle Lakes Archaeological District, Controlled Use Areas, and the National Wild Rivers. This situation can also be used in the interpretive program.

- The variety of agencies involved can be used to focus on different resources needing different management due to fragility and uniqueness. It can also be used to focus on interagency cooperation.

Appendix C: Information Sources

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